CK

A3212_A3408_A3409_A3410_System_Electrical_Schem

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Multi-Vendor Criticals

Capacitors

In descending order of value, then

PART NUMBER	COMMEN
138S097	CAP,CER,X5R,10UF,20%,10V,0402,H=0.65M
138S069	CAP,CER,X5R,1UF,20%,6.3V,020
138S0001	CAP,CER,X5R,1UF,20%,16V,0201,H=0.39M
132S024	CAP,CER,X5R,0.01UF,10%,6.3V,0100
132S0028	CAP,CER,X5R,6800PF,10%,16V,0100
132S039	CAP,CER,X5R,1000PF,10%,10V,0100
132S0025	CAP,CER,X7R,330PF,10%,16V,0100
131S0054	CAP,CER,C0G,220PF,5%,25V,0100
131S0005	CAP,CER,NPO/COG,100PF,5%,35V,0100
131S0015	CAP,CER,NPO/COG,100PF,5%,25V,0100
131S0017	CAP,CER,C0G,220PF,5%,25V,0100
131S0029	CAP,CER,NPO/COG,12PF,5%,16V,0100
131S0035	CAP,CER,NPO/COG,10PF,5%,16V,0100
138S075	CAP,CER,X5R,22UF,20%,10V,060
131S0074	CAP,CER,NP0/C0G,47PF,5%,16V,0100
131S0073	CAP,CER,NP0/C0G,18PF,5%,16V,0100
132S0005	CAP,X7R,330PF,10%,25V,02
131S0073	CAP,CER,NP0/C0G,56PF,5%,25V,0100
132S0027	CAP,CER,0.22UF,20%,10V,X5R,020
131S0074	CAP,CER,NP0/C0G,33PF,5%,16V,0100

MLCC

22uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0045	138S0029	ALL	CAP,X5R,22UF,20%,16V,KYO,H=0.8MM,07

Primary:
Murata

16uF, 0402,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0048	138S0031	ALL	CAP,X5R,16UF,20%,4V,T,040
138S0031	138S0031	ALL	CAP,X5R,16UF,20%,4V,M,040
138S0031	138S0031	ALL	CAP,X5R,16UF,20%,4V,M,040

Primary:
Murata Taiyo

Kyocera
Samsun

15uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0004	138S0000	(C4090-C4092,C4390,C6272,C6591,C7097,C7511_S,C9302-	0402,15uF,6.3V,
138S0040	138S0000		0402,13uF,6.3V, Murata
138S0038	138S0000		0402,9uF,6.3V, Samco

Primary:
Murata
Gen2:
Gen2:

14uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0014	138S0014	ALL	0402-3T,10.5uF@1V,
138S0015	138S0014	ALL	0402-3T,10.5uF@1V,
138S0015	138S0014		0402-3T,10.5uF@1V,

Primary:
Murata

Samsun
g Taiyo

13uF, 0402,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0040	138S0040	ALL	CAP,X5R,13UF,20%,6.3V,4.9UF@3V,K,040
138S0038	138S0040	ALL	CAP,X5R,9UF,20%,6.3V,4.9@3V,SAM,040

Primary:

Murata

Kyocera

PART NUMBER	COMMEN
138S0031	CAP,CER,X5R,16UF,20%,4V,040
138S0040	CAP,X5R,13UF,20%,6.3V,4.9UF@3V,M,040
138S0014	0402-
138S0000	0402,15uF,6.3
138S0029	CAP,CER,X5R,22UF,20%,16V,0402,H=0.8M

Capacitor

4.7uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S110	138S071	ALL	CAP,CER,X5R,4.7UF,20%,10V,040

PART NUMBER	COMMEN
138S071	0402,4.7uF,10

4.7uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0021	138S106	ALL	CAP,X5R,4.7UF,20%,16V,0402,H=0.55MM,

PART NUMBER	COMMEN
138S106	CAP,CER,X5R,4.7UF,20%,16V,0402,H=0.55M

4.2uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0051	138S096	ALL	CAP,CER,X5R,4.2UF,10%,16V,K,0402H0.55,KYOCER
138S0051	138S096	ALL	CAP,CER,X5R,4.2UF,10%,16V,S,0402,H0.55,SEMC

PART NUMBER	COMMEN
138S096	CAP,CER,X5R,4.2UF,10%,16V,0402,H=0.55M

4uF,

ALTERNATE PART NO.	PRIMARY PART NO.	COMMEN
138S0011	138S0007	CAP,X5R,4UF,0201,0.55MM,KYOCER
138S0011	138S0007	CAP,X5R,4UF,0201,0.55MM,TAIY
138S0051	138S0007	CAP,X5R,4UF,0201,0.55MM,SEMC

PART NUMBER	COMMEN
138S0007	0201,X5R,4UF,0201,0.55MM,MURAT

3uF @ 1V,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0013	138S0013	ALL	0201,3uF@1V,KYOCER
138S0016	138S0013	ALL	0201,3uF@1V,TAIY
138S0028	138S0013	ALL	0201,3uF@1V,SAMSUN

PART NUMBER	COMMEN
138S0013	0201,3uF@1

3uF @ 1V,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0045	138S0044	ALL	CAP,X5R,4.9UF,20%,4V,3UF@1V,0201H.55,HZ
138S0044	138S0044	ALL	CAP,X5R,4.7UF,20%,4V,3UF@1V,0201H.55,HZ
138S0048	138S0044	ALL	CAP,X5R,4.4UF,20%,4V,3UF@1V,0201H.5

PART NUMBER	COMMEN
138S0044	CAP,X5R,4.3UF,20%,4V,3UF@1V,0201H.55,HZ

3.9uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0043	138S0044	ALL	CAP,X5R,4.3UF,20%,6.3V,1.48@3V,0201H.
138S0044	138S0044	ALL	CAP,X5R,2.5UF,20%,6.3V,1.48@3V,0201H.

PART NUMBER	COMMEN
138S0044	CAP,X5R,3.9UF,20%,6.3V,1.48@3V,0201H.

2.2uF, 0201,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0028	138S0013	ALL	CAP,X5R,2.2UF,20%,10V,0.39MM,0201,KY

PART NUMBER	COMMEN
138S0013	CAP,X5R,2.2UF,20%,10V,MUR,H=0.39,02

2.2uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0004	138S0045	(C2170-	CAP,CER,X5R,2.2UF,20%,6.3V,020
138S083	138S0045	(C2170-	CAP,CER,X5R,2.2UF,20%,6.3V,020
138S0051	138S0045	(C2170-	CAP,X5R,2.2UF,20%,6.3V,S,HZ020

PART NUMBER	COMMEN
138S0045	CAP,CER,X5R,2.2UF,20%,6.3V,020

1uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S073	138S070	ALL	CAP,CER,X5R,1UF,20%,10V,0201,SAMSUN
138S094	138S070	ALL	CAP,CER,X5R,1UF,20%,10V,0201,KYOCER
138S0051	138S0001	ALL	CAP,X5R,1UF,20%,16V,0201,H=0.39MM,KYOCER
138S0008	138S0001	ALL	CAP,X5R,1UF,20%,16V,0201,H=0.39MM,MURA

PART NUMBER	COMMEN
138S070	CAP,X5R,1UF,20%,10V,020

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
132S063	132S0008	ALL	CAP,CER,X5R,0.47UF,20%,25V,0201,Mura

PART NUMBER	COMMEN
132S0008	CAP,X5R,0.47UF,20%,25V,0201,Tai

1000pF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
131S0032	131S0002	ALL	CAP,C0G,1000PF,2%,25V,TAIYO,020

PART NUMBER	COMMEN
131S0002	CAP,C0G,1000PF,2%,25V,02

0.47uF,

All RefDes in ( ) are dual-sourced from Murata and Taiyo

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0012	138S0041	ALL	CAP,CER,X5R,0.47UF,20%,6.3V,KYO,0100
138S0051	138S0041		CAP,X5R,0.47UF,20%,6.3V,0.09@3V,S,010

PART NUMBER	COMMEN
138S0041	CAP,X5R,0.47UF,20%,6.3V,MUR,0100

0.22uF,

RefDes field intentionally left blank to allow selective single-

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
132S0038	132S0001		01005,0.22uF,6.3V,Tai
132S0030	132S0001	(C2800-	01005,0.22uF,6.3V,Kyoce

PART NUMBER	COMMEN
132S0001	01005,0.22uF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
132S0019	132S0020	ALL	CAP,CER,X5R,0.1UF,20%,10V,01005,Mura
132S0020	132S0020	ALL	CAP,CER,X5R,0.1UF,20%,10V,01005,Kyocer

PART NUMBER	COMMEN
132S0020	01005,0.1uF,10V,Tai

0.1uF, 01005,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
132S0018	132S031	(C2806-C2809,C5228-	CAP,CER,X5R,0.1UF,20%,6.3V,0100
132S0035	132S031		CAP,CER,X5R,0.1UF,20%,6.3V,0100

PART NUMBER	COMMEN
132S031	01005,0.1uF,

0.1uF, 01005,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
132S0015	132S068	ALL	CAP,CER,X5R,0.1UF,10%,6.3V,0100

PART NUMBER	COMMEN
132S068	CAP,CER,X5R,0.1UF,10%,6.3V,0100

8.2nF, 01005,

ALTERNATE PART NO.	PRIMARY PART NO.	COMMEN
132S0038	132S0037	CAP,CER,X5R,8200PF,10%,6.3V,0100

PART NUMBER	COMMEN
132S0037	CAP,CER,X5R,8200PF,10%,6.3V,0100

2.2nF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
132S0030	132S042	ALL	CAP,X5R,2200PF,10%,16V,01005,Kyoce
132S0026	132S042		CAP,CER,X5R,2200PF,10%,16V,0100

PART NUMBER	COMMEN
132S042	CAP,X5R,2200PF,10%,16V,01005,Tai

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Additional Capacitor Alternates 0.1uF, 0201

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
132S0022	132S0001	ALL	CAP,CER,X5R,0.1UF,10%,35V,020

PART NUMBER	COMMEN
132S0001	CAP,CER,X5R,0.1UF,10%,35V,020

33nF,

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
132S0031	132S0031	ALL	CAP,CER,33NF,10%,50V,X7R,H=0.55,M,04

PART NUMBER	COMMEN
132S0031	CAP,CER,33NF,10%,50V,X7R,H=0.55,M,04

Level Shifter

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
311S0023	311S0023	ALL	IC,74AVC2T45,XCVR,2 BIT,2 SPLY,X2SON8
311S0023	311S0021	ALL	IC,74AVC1T45,XCVR,1 BIT,2 SPLY,X2SON6
311S0026	311S0023	ALL	IC,LSF0101,XCVR,2 BIT,2 SPLY,X2SON6
311S0034	311S0023	ALL	IC,SGM4542V,XCVR,2 BIT,2 SPLY,BIDI,DFN8

PART NUMBER	COMMEN
311S0023	IC,74AVC2T45,XCVR,2 BIT,2 SPLY,X2SON8
311S0021	IC,74AVC1T45,XCVR,1 BIT,2 SPLY,X2SON6
311S0023	IC,LSF0101,XCVR,2 BIT,2 SPLY,X2SON6
311S0023	IC,NVT0202,XCVR,2 BIT,2 SPLY,BIDI,DFN8

ZRX Cap

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0018	138S0024	ALL	CAP,X5R,4.7UF,20%,25V,040
138S0018	138S0024	ALL	CAP,X5R,2.2UF,20%,25V,040

PART NUMBER	COMMEN
138S0024	CAP,X5R,4.7UF,20%,25V,040
138S0024	CAP,X5R,2.2UF,20%,25V,040

Power Inductor

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
152S0151	152S0089	ALL	IND,CPLD,0.1UH,20%,5.5A,20MO,201
152S0177	152S0081	ALL	Taiyo,IND,MLD,0.22UH,20%,5.3A,40MO,H=0.65,1
152S0156	152S0098	ALL	Taiyo,IND,MLD,0.47UH,4.0A,45MO,20
152S0177	152S0098	ALL	Taiyo,IND,MLD,0.47UH,20%,2.9A,70MO,H=0.65,1
152S0082	152S0082	ALL	Taiyo,IND,MLD,1UH,20%,3A,60MO,H=0.65,20
152S0099	152S0098	ALL	Taiyo,IND,MLD,1.0UH,1.5A,67MO,H=0.65,20
152S0086	152S0087	ALL	CYNTEC,IND,MLD,0.47UH,5.6A,30MO,H=0.8,201
152S0157	152S0125	ALL	TAIYO,IND,PWR,0.47UH,3.8A,39MO,H=0.65,20

PART NUMBER	COMMEN
152S0089	Taiyo,IN
152S0081	Cyntec,IN
152S0098	Cyntec,IN
152S0098	Cyntec,IN
152S0082	Cyntec,IN
152S0098	Cyntec,IN

Misc.

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
155S0019	155S0040	ALL	FERR BD,150OHM,25%,200MA,0.7OHM
155S0041	155S087	ALL	FERR BD,10OHM,50%,1.1A,0.05OHM
155S0013	155S075	ALL	FERR BD,240OHM,25%,200MA,1.0OHM
155S0058	155S0014	ALL	FERR
377S0007	377S0000	ALL	TVS,BIDIR,5.8V,6PF,0100
377S0014	377S0000	ALL	TVS,BIDIR,5V,6PF,0100
107S0046	107S0034	ALL	THERMISTOR,NTC,10K

PART NUMBER	COMMEN
155S0040	FERR BD,150OHM,25%,200MA,0.7OHM
155S087	FERR BD,10OHM,50%,1.1A,0.05OHM
155S075	FERR BD,240 OHM,25%,200MA,1.0
155S0014	FERR
377S0000	TVS,BIDIR,5.8V,6PF,0100
107S0034	THERMISTOR,NTC,10K

Display Choke

ALTERNATE PART NO.	PRIMARY PART NO.	COMMEN
155S057	155S096	FERR BD,70 OHM,25%,300MA,0.45

PART NUMBER	COMMEN
155S096	FERR BD,70 OHM,25%,300MA,0.4

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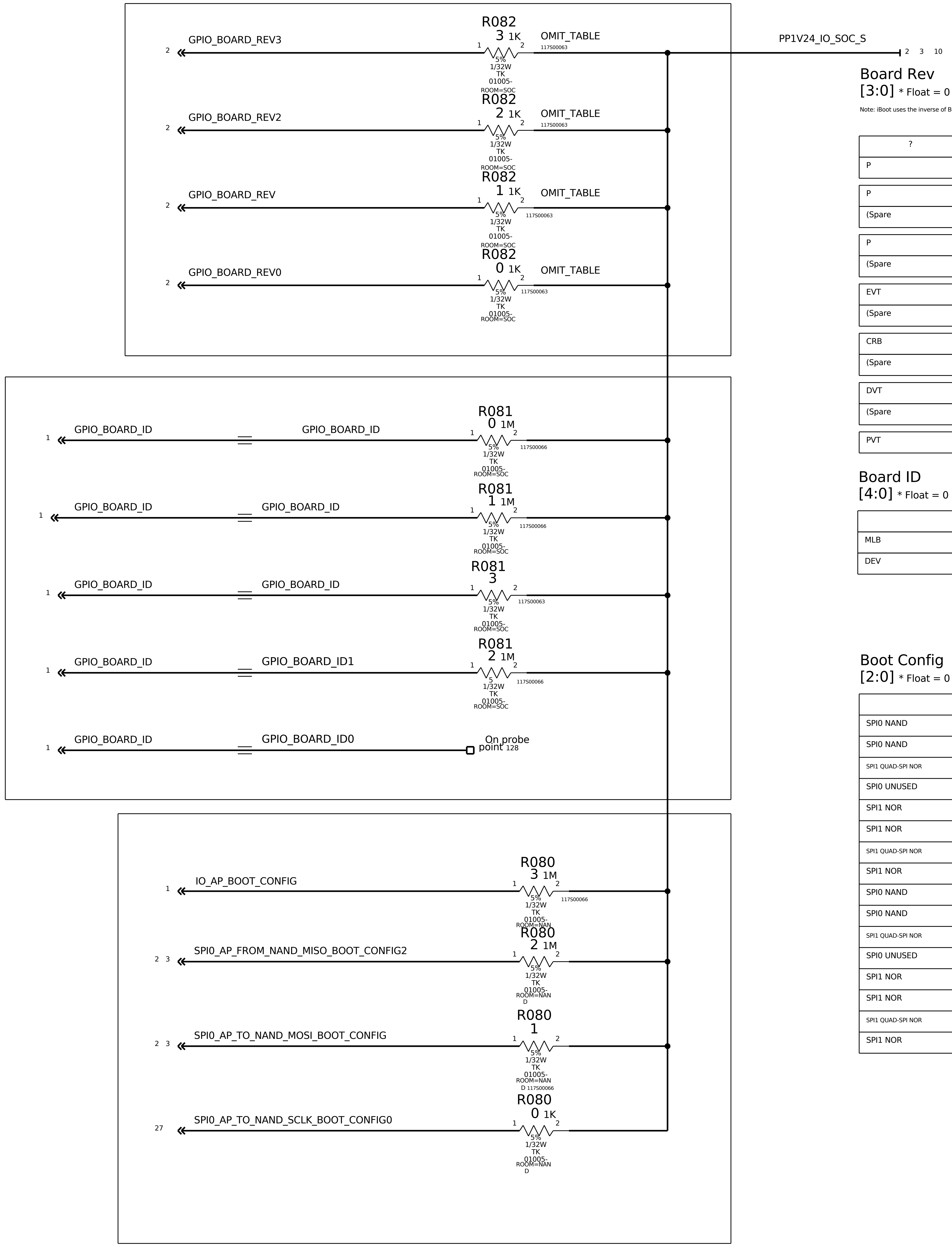
BOOTSTRAPPING

BOARD REV + BOARD ID + BOOT


GPIO_BOARD_REV3
R082
3 1K
OMIT_TABLE
117S00063
GPIO_BOARD_REV2
R082
2 1K
OMIT_TABLE
117S00063
GPIO_BOARD_REV
R082
1 1K
OMIT_TABLE
117S00063
GPIO_BOARD_REV0
R082
0 1K
OMIT_TABLE
117S00063
5%
1/32W
TK
01005-
ROOM=SOC
PP1V24_IO_SOC_S
2 3 10
GPIO_BOARD_ID
GPIO_BOARD_ID
R081
0 1M
117S00066
GPIO_BOARD_ID
GPIO_BOARD_ID
R081
1 1M
117S00066
GPIO_BOARD_ID
GPIO_BOARD_ID
R081
3
117S00063
GPIO_BOARD_ID
GPIO_BOARD_ID1
R081
2 1M
117S00066
GPIO_BOARD_ID
GPIO_BOARD_ID0
On probe point 128
IO_AP_BOOT_CONFIG
R080
3 1M
117S00066
SPI0_AP_FROM_NAND_MISO_BOOT_CONFIG2
R080
2 1M
SPI0_AP_TO_NAND_MOSI_BOOT_CONFIG
R080
1
117S00066
SPI0_AP_TO_NAND_SCLK_BOOT_CONFIG0
R080
0 1K
ROOM=NAND
27

Board Rev
[3:0] * Float = 0 |

Note: iBoot uses the inverse of BOARD_REV[3:0], so that it counts up (Proto0 = 0x0,

		R082	R082	R082	R082
?	BOARD_REV[3:0]	[3	[2	[1	[0
P	4'b111	1	1	1	1
P	4'b111	1	1	1	0
(Spare	4'b110	1	1	0	1
P	4'b101	1	0	1	1
(Spare	4'b101	1	0	1	0
EVT	4'b011	0	1	1	1
(Spare	4'b011	0	1	1	0
CRB	4'b010	0	1	0	0
(Spare	4'b001	0	0	1	1
DVT	4'b001	0	0	1	0
(Spare	4'b000	0	0	0	1
PVT	4'b000	0	0	0	0

PART NUMBER	BOMOPTIO	REFERENCE DESIGNATORS	QT	DESCRIPTION
117S0006	BOARD_REV:PROTO0	R0820-	4	RES,TK,1K
117S0006	BOARD_REV:PROTO1	R0821-	3	RES,TK,1K
117S0006	BOARD_REV:PROTO1	R082	1	RES,TK,1M
117S0006	BOARD_REV:PROTO2	R0820,R0821,R082	3	RES,TK,1K
117S0006	BOARD_REV:PROTO2	R082	1	RES,TK,1M
117S0006	BOARD_REV:EVT	R0820-	3	RES,TK,1K
117S0006	BOARD_REV:EVT	R082	1	RES,TK,1M
117S0006	BOARD_REV:CRB	R082	1	RES,TK,1K
117S0006	BOARD_REV:CRB	R0820,R0821,R082	3	RES,TK,1M
117S0006	BOARD_REV:DVT	R082	1	RES,TK,1K
117S0006	BOARD_REV:DVT	R0820,R0822,R082	3	RES,TK,1M
117S0006	BOARD_REV:PVT	R0820-	4	RES,TK,1M

Board ID
[4:0] * Float = 0

		R081	R081	R081	R081	
	BOARD_ID[4:0	[4	[3	[2	[1	[0] 0=MLB,
MLB	5'b0010	0	0	1	0	0
DEV	5'b0010	0	0	1	0	1

Boot Config
[2:0] * Float = 0 |

				R080	R080	R080	R080	
	USAGE	SPEED	TEST	[3	[2	[1	[0	
SPI0 NAND	--	12MH	--	0	0	0	0	
SPI0 NAND	POR	40MH	--	0	0	0	1	<--
SPI1 QUAD-SPI NOR	--	24MH	--	0	0	1	0	
SPI0 UNUSED	--	UNUSED	--	0	0	1	1	
SPI1 NOR	--	6MHz	--	0	1	0	0	
SPI1 NOR	--	12MH	--	0	1	0	1	
SPI1 QUAD-SPI NOR	--	40MH	--	0	1	1	0	
SPI1 NOR	--	40MH	--	0	1	1	1	
SPI0 NAND	--	12MH	Test	1	0	0	0	
SPI0 NAND	--	40MH	Test	1	0	0	1	
SPI1 QUAD-SPI NOR	--	24MH	Test	1	0	1	0	
SPI0 UNUSED	--	UNUSED	Test	1	0	1	1	
SPI1 NOR	--	6MHz	Test	1	1	0	0	
SPI1 NOR	--	12MH	Test	1	1	0	1	
SPI1 QUAD-SPI NOR	--	40MH	Test	1	1	1	0	
SPI1 NOR	--	40MH	Test	1	1	1	1	

PAGE TITLE
SYSTEM: Bootstrapping

Apple

DRAWING NUMBER
SIZE

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TOP SIDE
ST_AP_NW_HNGRMNT
OMIT_TABLE
HANGER-BOSS-SHIFT-MLB-D2Y
SH_AP_N
SHLD-MLB-CG-N-V59
ST_AP_NW_CLIP
STIFFENER-MLB-DISP-D27
SM 806-33327
SH_AP_S
SHLD-MLB-AP-S-BP-UF-V59 806-45364
ST_AP_SE_CLIP
STIFFENER-MLB-DISP-D27
SM 806-
860-02036
SB090
STDOFF-2.56OD1.4ID-0.76H-SM
BOTTOM
ST_AP_BOT_STIFFENER
STIFFENER-MLB-CG-BOT-V59
SM 806-
FD090 FI
0P5SQ-CROSS-NSP 998-04808
FD091 FI
0.75M0.5SQ-NSP 998-
FD0911 FID
FD0912 FID
MEMS UF
C090
0.1U
0201 10V 10% X6S-CERM
ROOM=PMU
0.1UF
U
R0900
R0901
R0902
R0903
R0904
R0905
R0906
R0907
R0908
R0909
R0910
R0911
R0912
R0913
R0914
R0915
R0916
R0917
R0918
R0920
R0921
R0922
R0923
R0926
R0928
R0930
R0931
R0936
R0937
R0939
NOSTUFF
R0940
R0941
R0943
R0945
R0948
R0949
R0950
R0951
R0953
R0954
R0955
R0956
R0958
R0959
R0960
R0961
R0963
R0964
R0965
R0967
R0969
R0975
R0976
R0977
0% 1/32 W TK 1005
ROOM=DFM
117S0067

SYSTEM: Mechanical

Apple

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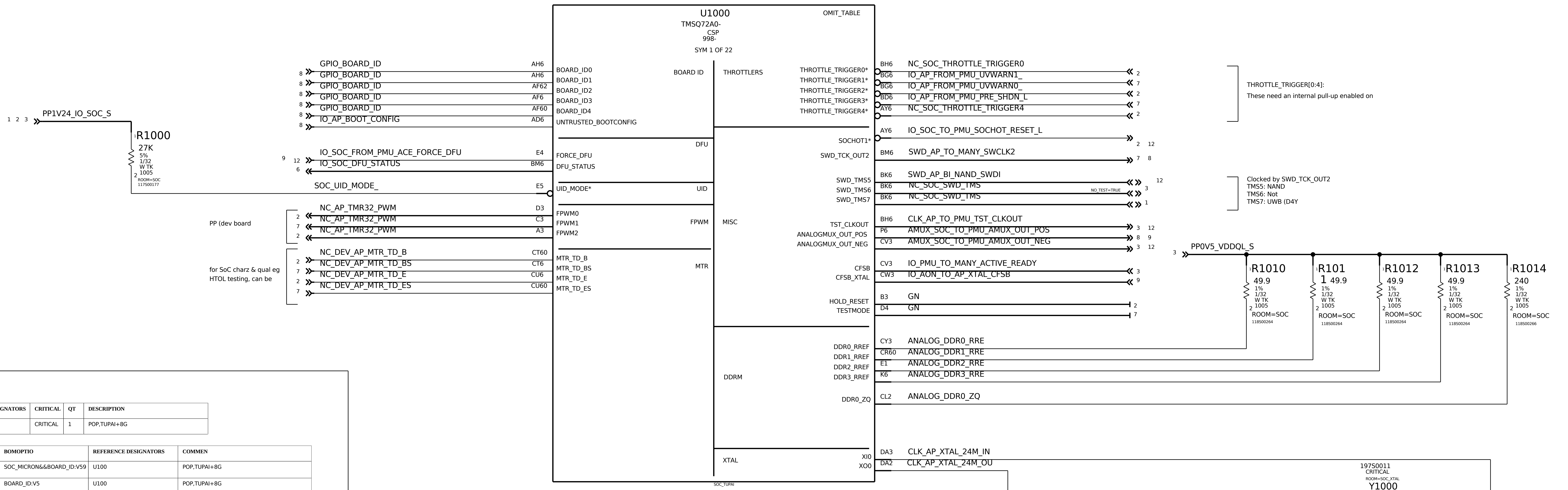
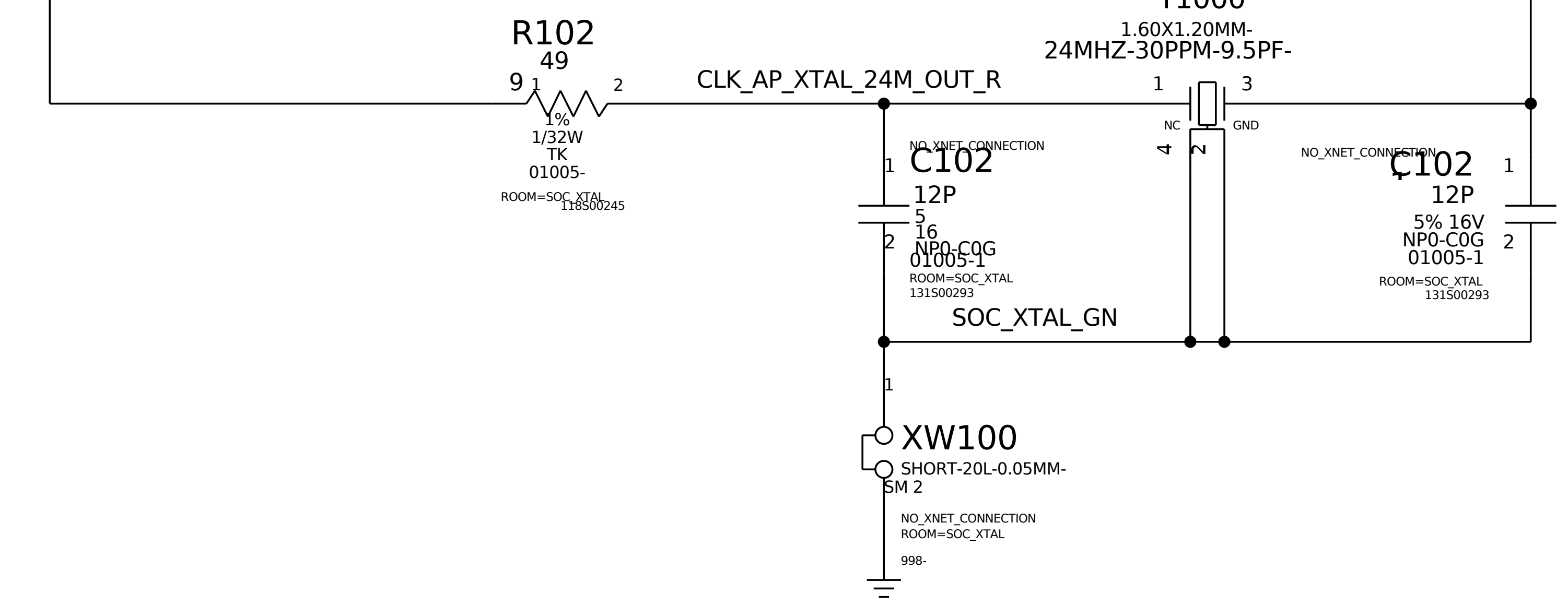
SOC:


U1000
TMSQ72A0-
CSP
998-
SYM 1 OF 22
OMIT_TABLE
SOC_TUPAI
1 2 3
PP1V24_IO_SOC_S
R1000
27K
5%
1/32
W TK
1005
ROOM=SOC
117S00177
GPIO_BOARD_ID AH6 BOARD_ID0
GPIO_BOARD_ID AH6 BOARD_ID1
GPIO_BOARD_ID AF62 BOARD_ID2
GPIO_BOARD_ID AF6 BOARD_ID3
GPIO_BOARD_ID AF60 BOARD_ID4
IO_AP_BOOT_CONFIG AD6 UNTRUSTED_BOOTCONFIG
BOARD ID
IO_SOC_FROM_PMU_ACE_FORCE_DFU E4 FORCE_DFU
IO_SOC_DFU_STATUS BM6 DFU_STATUS
DFU
SOC_UID_MODE_ E5 UID_MODE*
UID
PP (dev board
NC_AP_TMR32_PWM D3 FPWM0
NC_AP_TMR32_PWM C3 FPWM1
NC_AP_TMR32_PWM A3 FPWM2
FPWM
for SoC charz & qual eg
HTOL testing, can be
NC_DEV_AP_MTR_TD_B CT60 MTR_TD_B
NC_DEV_AP_MTR_TD_BS CT6 MTR_TD_BS
NC_DEV_AP_MTR_TD_E CU6 MTR_TD_E
NC_DEV_AP_MTR_TD_ES CU60 MTR_TD_ES
MTR
THROTTLERS
THROTTLE_TRIGGER0* BH6 NC_SOC_THROTTLE_TRIGGER0
THROTTLE_TRIGGER1* BG6 IO_AP_FROM_PMU_UVWARN1_
THROTTLE_TRIGGER2* BG6 IO_AP_FROM_PMU_UVWARN0_
THROTTLE_TRIGGER3* BD6 IO_AP_FROM_PMU_PRE_SHDN_L
THROTTLE_TRIGGER4* AY6 NC_SOC_THROTTLE_TRIGGER4
THROTTLE_TRIGGER[0:4]:
These need an internal pull-up enabled on
MISC
SOCHOT1* AY6 IO_SOC_TO_PMU_SOCHOT_RESET_L
SWD_TCK_OUT2 BM6 SWD_AP_TO_MANY_SWCLK2
SWD_TMS5 BK6 SWD_AP_BI_NAND_SWDI
SWD_TMS6 BK6 NC_SOC_SWD_TMS
SWD_TMS7 BK6 NC_SOC_SWD_TMS
NO_TEST=TRUE
Clocked by SWD_TCK_OUT2
TMS5: NAND
TMS6: Not
TMS7: UWB (D4Y
TST_CLKOUT BH6 CLK_AP_TO_PMU_TST_CLKOUT
ANALOGMUX_OUT_POS P6 AMUX_SOC_TO_PMU_AMUX_OUT_POS
ANALOGMUX_OUT_NEG CV3 AMUX_SOC_TO_PMU_AMUX_OUT_NEG
CFSB CV3 IO_PMU_TO_MANY_ACTIVE_READY
CFSB_XTAL CW3 IO_AON_TO_AP_XTAL_CFSB
HOLD_RESET B3 GN
TESTMODE D4 GN
DDRM
DDR0_RREF CY3 ANALOG_DDR0_RRE
DDR1_RREF CR60 ANALOG_DDR1_RRE
DDR2_RREF E1 ANALOG_DDR2_RRE
DDR3_RREF K6 ANALOG_DDR3_RRE
DDR0_ZQ CL2 ANALOG_DDR0_ZQ
PP0V5_VDDQL_S
R1010 49.9 1% 1/32 W TK 1005 ROOM=SOC 118S00264
R101 1 49.9 1% 1/32 W TK 1005 ROOM=SOC 118S00264
R1012 49.9 1% 1/32 W TK 1005 ROOM=SOC 118S00264
R1013 49.9 1% 1/32 W TK 1005 ROOM=SOC 118S00264
R1014 240 1% 1/32 W TK 1005 ROOM=SOC 118S00266
XTAL
XI0 DA3 CLK_AP_XTAL_24M_IN
XO0 DA2 CLK_AP_XTAL_24M_OU


197S0011
CRITICAL
ROOM=SOC_XTAL
Y1000
1.60X1.20MM-
24MHZ-30PPM-9.5PF-
NC
GND
R102
49
1%
1/32W
TK
01005-
ROOM=SOC_XTAL
118S00245
CLK_AP_XTAL_24M_OUT_R
NO_XNET_CONNECTION
C102
12P
5
16
NP0-C0G
01005-1
ROOM=SOC_XTAL
131S00293
C102
12P
5% 16V
NP0-C0G
01005-1
ROOM=SOC_XTAL
131S00293
SOC_XTAL_GN
XW100
SHORT-20L-0.05MM-
SM 2
NO_XNET_CONNECTION
ROOM=SOC_XTAL
998-

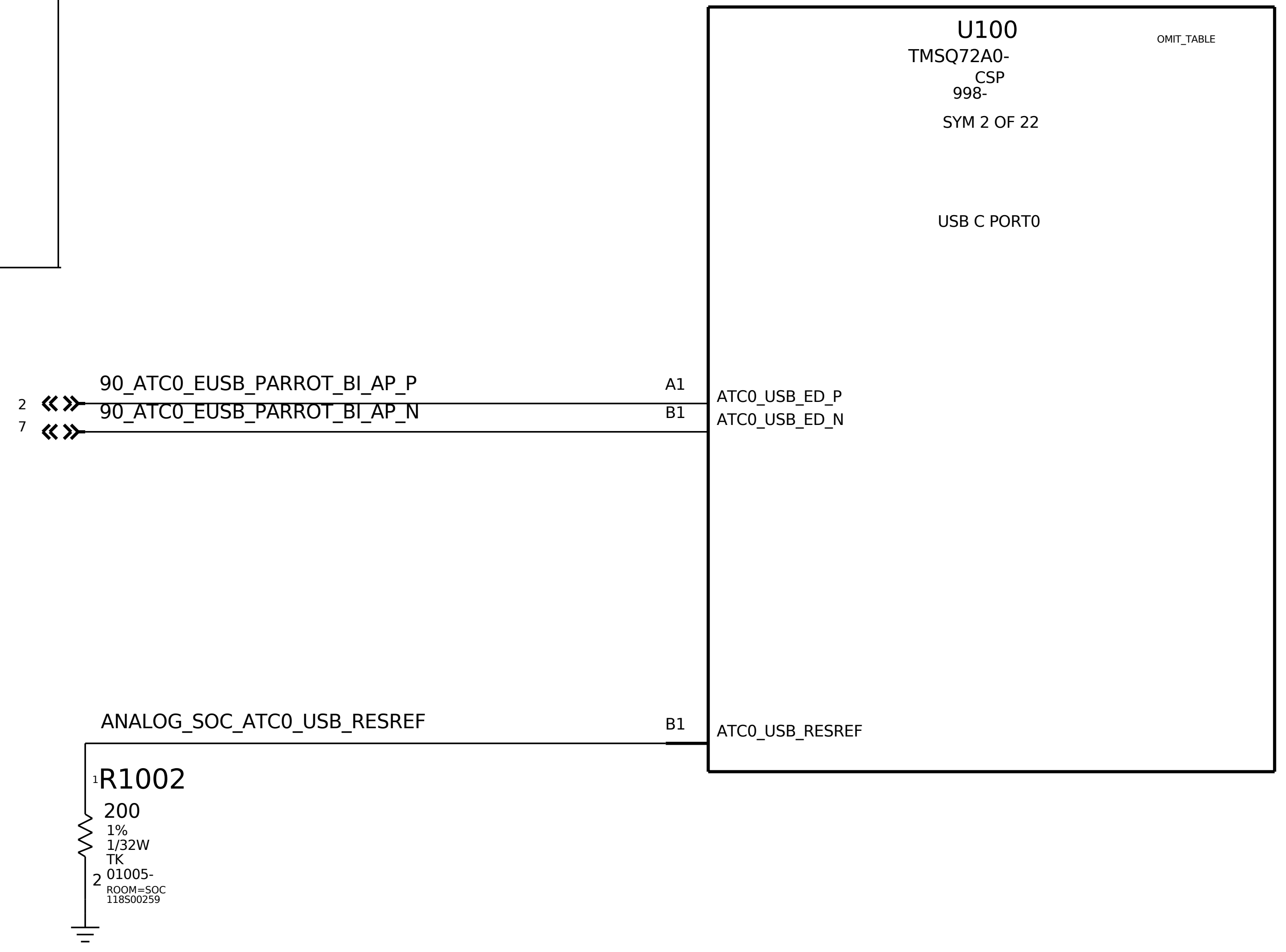
SOC

PART NUMBER	BOMOPTIO	REFERENCE DESIGNATORS	CRITICAL	QT	DESCRIPTION
339S0160	BOARD_ID:V5	U100	CRITICAL	1	POP,TUPAI+8G

ALTERNATE PART NO.	PRIMARY PART NO.	BOMOPTIO	REFERENCE DESIGNATORS	COMMEN
339S0160	339S0160	SOC_MICRON&&BOARD_ID:V59	U100	POP,TUPAI+8G
339S0160	339S0160	BOARD_ID:V5	U100	POP,TUPAI+8G
339S0160	339S0160	BOARD_ID:V5	U100	POP,TUPAI+8G
339S0160	339S0160	BOARD_ID:V5	U100	POP,TUPAI+8G
339S0160	339S0160	SOC_MICRON&&BOARD_ID:V59	U100	POP,TUPAI+8G
339S0160	339S0160	BOARD_ID:V5	U100	POP,TUPAI+8G
339S0160	339S0160	BOARD_ID:V5	U100	POP,TUPAI+8G

D4

SOC: ATC


U100
TMSQ72A0-
CSP
998-
SYM 2 OF 22
OMIT_TABLE
USB C PORT0
90_ATC0_EUSB_PARROT_BI_AP_P A1 ATC0_USB_ED_P
90_ATC0_EUSB_PARROT_BI_AP_N B1 ATC0_USB_ED_N
ANALOG_SOC_ATC0_USB_RESREF B1 ATC0_USB_RESREF
R1002
200
1%
1/32W
TK
01005-
ROOM=SOC
118S00259

PAGE TITLE

SOC: USB & Misc

Apple

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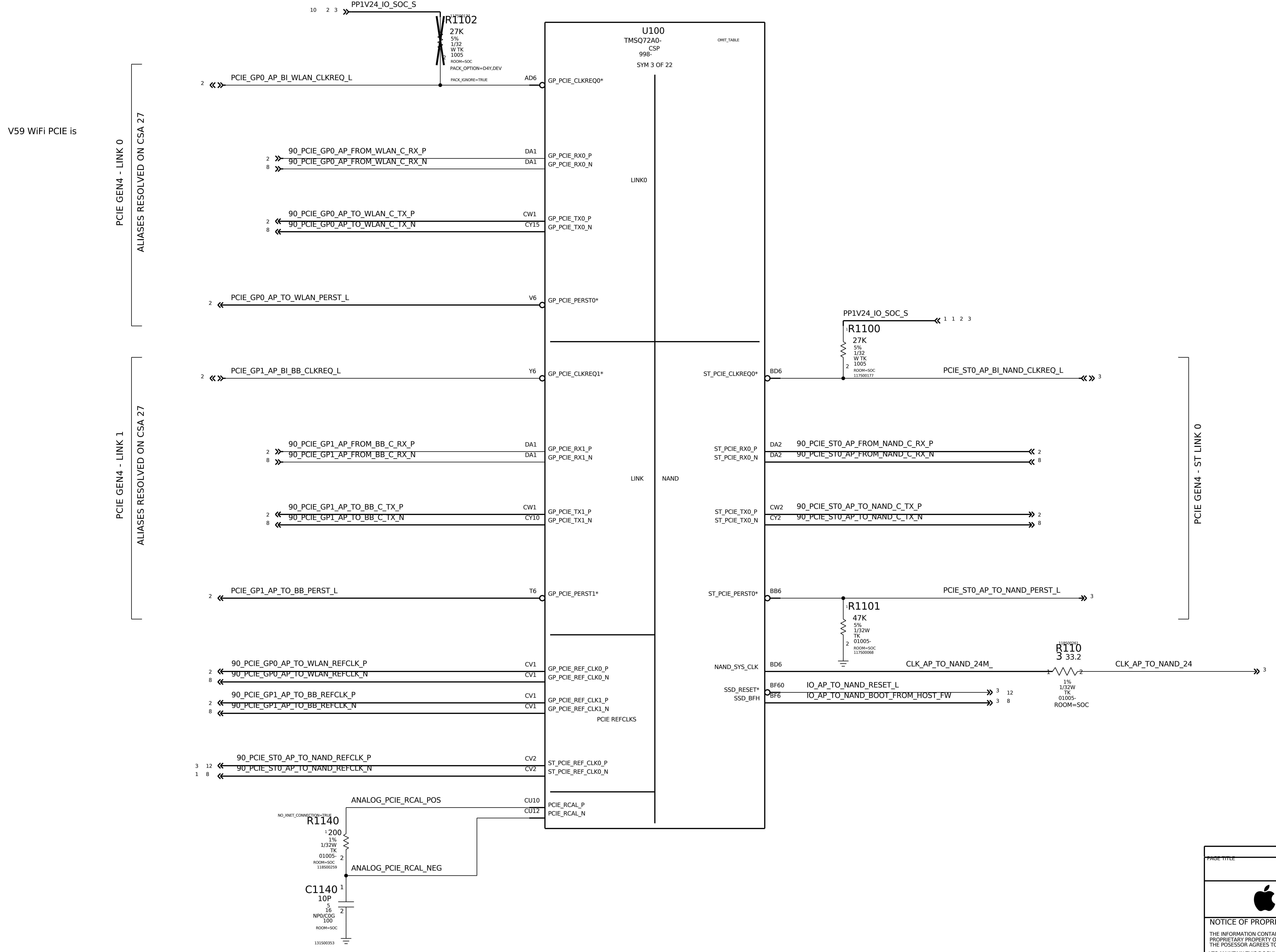
SOC: PCIE &


V59 WiFi PCIE is
PCIE GEN4 - LINK 0
ALIASES RESOLVED ON CSA 27
PCIE GEN4 - LINK 1
ALIASES RESOLVED ON CSA 27
PCIE GEN4 - ST LINK 0
PP1V24_IO_SOC_S
10 2 3
117S00177
R1102
27K
5%
1/32
W TK
1005
ROOM=SOC
PACK_OPTION=D4Y,DEV
PACK_IGNORE=TRUE
U100
TMSQ72A0-
CSP
998-
SYM 3 OF 22
OMIT_TABLE
PCIE_GP0_AP_BI_WLAN_CLKREQ_L
AD6
GP_PCIE_CLKREQ0*
90_PCIE_GP0_AP_FROM_WLAN_C_RX_P
90_PCIE_GP0_AP_FROM_WLAN_C_RX_N
DA1
GP_PCIE_RX0_P
GP_PCIE_RX0_N
LINK0
90_PCIE_GP0_AP_TO_WLAN_C_TX_P
90_PCIE_GP0_AP_TO_WLAN_C_TX_N
CW1
CY15
GP_PCIE_TX0_P
GP_PCIE_TX0_N
PCIE_GP0_AP_TO_WLAN_PERST_L
V6
GP_PCIE_PERST0*
PCIE_GP1_AP_BI_BB_CLKREQ_L
Y6
GP_PCIE_CLKREQ1*
90_PCIE_GP1_AP_FROM_BB_C_RX_P
90_PCIE_GP1_AP_FROM_BB_C_RX_N
GP_PCIE_RX1_P
GP_PCIE_RX1_N
LINK
NAND
90_PCIE_GP1_AP_TO_BB_C_TX_P
90_PCIE_GP1_AP_TO_BB_C_TX_N
CW1
CY10
GP_PCIE_TX1_P
GP_PCIE_TX1_N
PCIE_GP1_AP_TO_BB_PERST_L
T6
GP_PCIE_PERST1*
90_PCIE_GP0_AP_TO_WLAN_REFCLK_P
90_PCIE_GP0_AP_TO_WLAN_REFCLK_N
CV1
GP_PCIE_REF_CLK0_P
GP_PCIE_REF_CLK0_N
90_PCIE_GP1_AP_TO_BB_REFCLK_P
90_PCIE_GP1_AP_TO_BB_REFCLK_N
GP_PCIE_REF_CLK1_P
GP_PCIE_REF_CLK1_N
PCIE REFCLKS
90_PCIE_ST0_AP_TO_NAND_REFCLK_P
90_PCIE_ST0_AP_TO_NAND_REFCLK_N
3 12
1 8
CV2
ST_PCIE_REF_CLK0_P
ST_PCIE_REF_CLK0_N
ANALOG_PCIE_RCAL_POS
CU10
CU12
PCIE_RCAL_P
PCIE_RCAL_N
NO_XNET_CONNECTION=TRUE
R1140
200
1%
1/32W
TK
01005-
ROOM=SOC
118S00259
ANALOG_PCIE_RCAL_NEG
C1140
10P
5
16
NP0/C0G
100
ROOM=SOC
131S00353
PP1V24_IO_SOC_S
1 1 2 3
R1100
27K
5%
1/32
W TK
1005
ROOM=SOC
117S00177
ST_PCIE_CLKREQ0*
BD6
PCIE_ST0_AP_BI_NAND_CLKREQ_L
ST_PCIE_RX0_P
ST_PCIE_RX0_N
DA2
90_PCIE_ST0_AP_FROM_NAND_C_RX_P
90_PCIE_ST0_AP_FROM_NAND_C_RX_N
ST_PCIE_TX0_P
ST_PCIE_TX0_N
CW2
CY2
90_PCIE_ST0_AP_TO_NAND_C_TX_P
90_PCIE_ST0_AP_TO_NAND_C_TX_N
ST_PCIE_PERST0*
BB6
PCIE_ST0_AP_TO_NAND_PERST_L
R1101
47K
5%
1/32W
TK
01005-
ROOM=SOC
117S00068
NAND_SYS_CLK
BD6
CLK_AP_TO_NAND_24M_
118S00261
R110
3 33.2
1%
1/32W
TK
01005-
ROOM=SOC
CLK_AP_TO_NAND_24
SSD_RESET*
SSD_BFH
BF60
BF6
IO_AP_TO_NAND_RESET_L
IO_AP_TO_NAND_BOOT_FROM_HOST_FW
3 12
3 8

PAGE TITLE

SOC: PCIE & NAND

Apple

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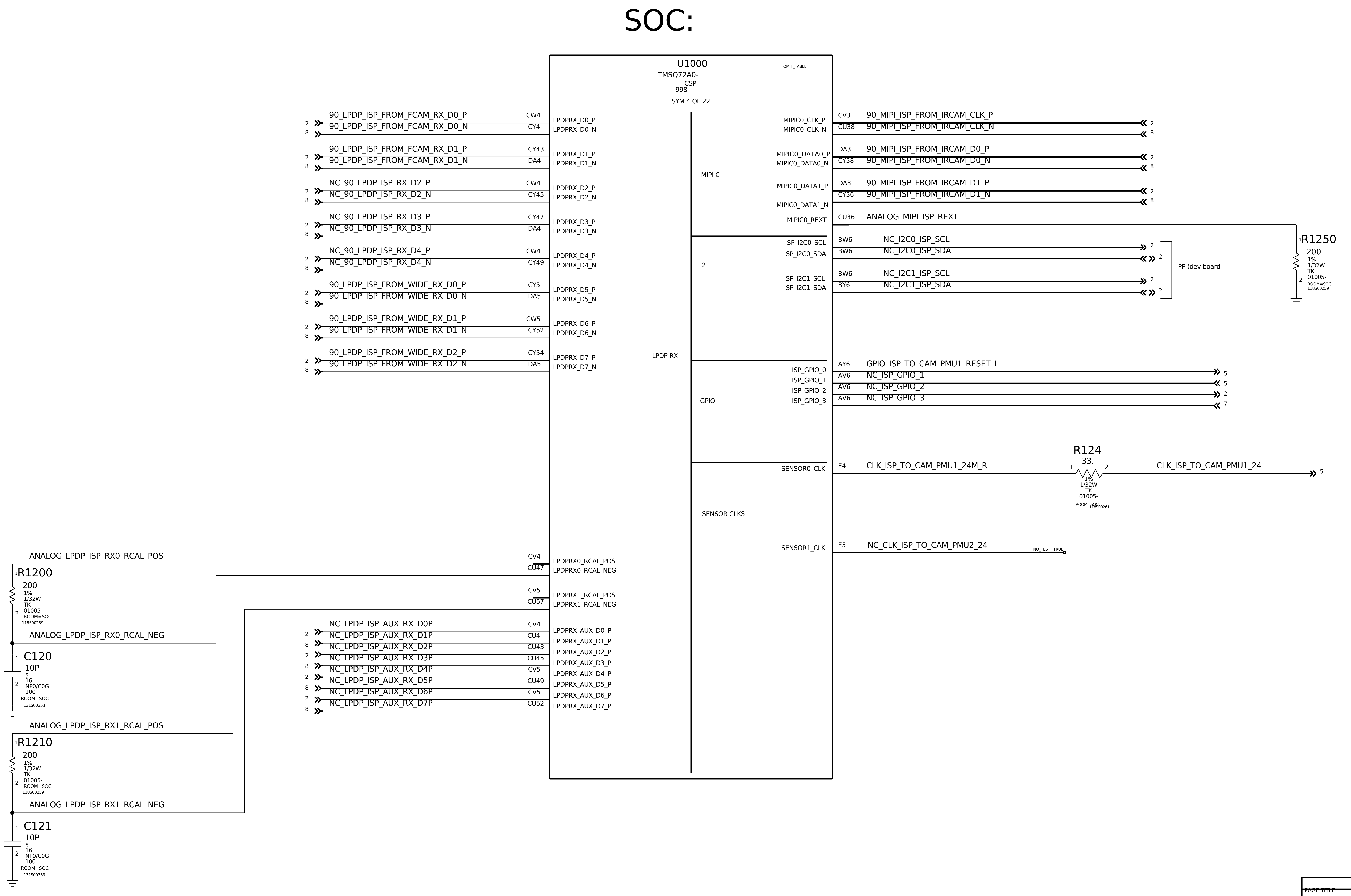
SOC:
U1000
TMSQ72A0-
CSP
998-
SYM 4 OF 22
OMIT_TABLE
90_LPDP_ISP_FROM_FCAM_RX_D0_P CW4 LPDPRX_D0_P
90_LPDP_ISP_FROM_FCAM_RX_D0_N CY4 LPDPRX_D0_N
90_LPDP_ISP_FROM_FCAM_RX_D1_P CY43 LPDPRX_D1_P
90_LPDP_ISP_FROM_FCAM_RX_D1_N DA4 LPDPRX_D1_N
NC_90_LPDP_ISP_RX_D2_P CW4 LPDPRX_D2_P
NC_90_LPDP_ISP_RX_D2_N CY45 LPDPRX_D2_N
NC_90_LPDP_ISP_RX_D3_P CY47 LPDPRX_D3_P
NC_90_LPDP_ISP_RX_D3_N DA4 LPDPRX_D3_N
NC_90_LPDP_ISP_RX_D4_P CW4 LPDPRX_D4_P
NC_90_LPDP_ISP_RX_D4_N CY49 LPDPRX_D4_N
90_LPDP_ISP_FROM_WIDE_RX_D0_P CY5 LPDPRX_D5_P
90_LPDP_ISP_FROM_WIDE_RX_D0_N DA5 LPDPRX_D5_N
90_LPDP_ISP_FROM_WIDE_RX_D1_P CW5 LPDPRX_D6_P
90_LPDP_ISP_FROM_WIDE_RX_D1_N CY52 LPDPRX_D6_N
90_LPDP_ISP_FROM_WIDE_RX_D2_P CY54 LPDPRX_D7_P
90_LPDP_ISP_FROM_WIDE_RX_D2_N DA5 LPDPRX_D7_N
2
8
MIPI C
I2
LPDP RX
GPIO
SENSOR CLKS
MIPIC0_CLK_P CV3 90_MIPI_ISP_FROM_IRCAM_CLK_P
MIPIC0_CLK_N CU38 90_MIPI_ISP_FROM_IRCAM_CLK_N
MIPIC0_DATA0_P DA3 90_MIPI_ISP_FROM_IRCAM_D0_P
MIPIC0_DATA0_N CY38 90_MIPI_ISP_FROM_IRCAM_D0_N
MIPIC0_DATA1_P DA3 90_MIPI_ISP_FROM_IRCAM_D1_P
MIPIC0_DATA1_N CY36 90_MIPI_ISP_FROM_IRCAM_D1_N
MIPIC0_REXT CU36 ANALOG_MIPI_ISP_REXT
ISP_I2C0_SCL BW6 NC_I2C0_ISP_SCL
ISP_I2C0_SDA BW6 NC_I2C0_ISP_SDA
ISP_I2C1_SCL BW6 NC_I2C1_ISP_SCL
ISP_I2C1_SDA BY6 NC_I2C1_ISP_SDA
PP (dev board
R1250
200
1%
1/32W
TK
01005-
ROOM=SOC
118S00259
ISP_GPIO_0 AY6 GPIO_ISP_TO_CAM_PMU1_RESET_L 5
ISP_GPIO_1 AV6 NC_ISP_GPIO_1 5
ISP_GPIO_2 AV6 NC_ISP_GPIO_2 2
ISP_GPIO_3 AV6 NC_ISP_GPIO_3 7
SENSOR0_CLK E4 CLK_ISP_TO_CAM_PMU1_24M_R
R124
33.
1%
1/32W
TK
01005-
ROOM=SOC
118S00261
CLK_ISP_TO_CAM_PMU1_24 5
SENSOR1_CLK E5 NC_CLK_ISP_TO_CAM_PMU2_24
NO_TEST=TRUE
ANALOG_LPDP_ISP_RX0_RCAL_POS CV4 LPDPRX0_RCAL_POS
CU47 LPDPRX0_RCAL_NEG
CV5 LPDPRX1_RCAL_POS
CU57 LPDPRX1_RCAL_NEG
R1200
200
1%
1/32W
TK
01005-
ROOM=SOC
118S00259
ANALOG_LPDP_ISP_RX0_RCAL_NEG
C120
10P
5
16
NP0/C0G
100
ROOM=SOC
131S00353
NC_LPDP_ISP_AUX_RX_D0P CV4 LPDPRX_AUX_D0_P
NC_LPDP_ISP_AUX_RX_D1P CU4 LPDPRX_AUX_D1_P
NC_LPDP_ISP_AUX_RX_D2P CU43 LPDPRX_AUX_D2_P
NC_LPDP_ISP_AUX_RX_D3P CU45 LPDPRX_AUX_D3_P
NC_LPDP_ISP_AUX_RX_D4P CV5 LPDPRX_AUX_D4_P
NC_LPDP_ISP_AUX_RX_D5P CU49 LPDPRX_AUX_D5_P
NC_LPDP_ISP_AUX_RX_D6P CV5 LPDPRX_AUX_D6_P
NC_LPDP_ISP_AUX_RX_D7P CU52 LPDPRX_AUX_D7_P
ANALOG_LPDP_ISP_RX1_RCAL_POS
R1210
200
1%
1/32W
TK
01005-
ROOM=SOC
118S00259
ANALOG_LPDP_ISP_RX1_RCAL_NEG
C121
10P
5
16
NP0/C0G
100
ROOM=SOC
131S00353

PAGE TITLE

SOC: ISP

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Apple

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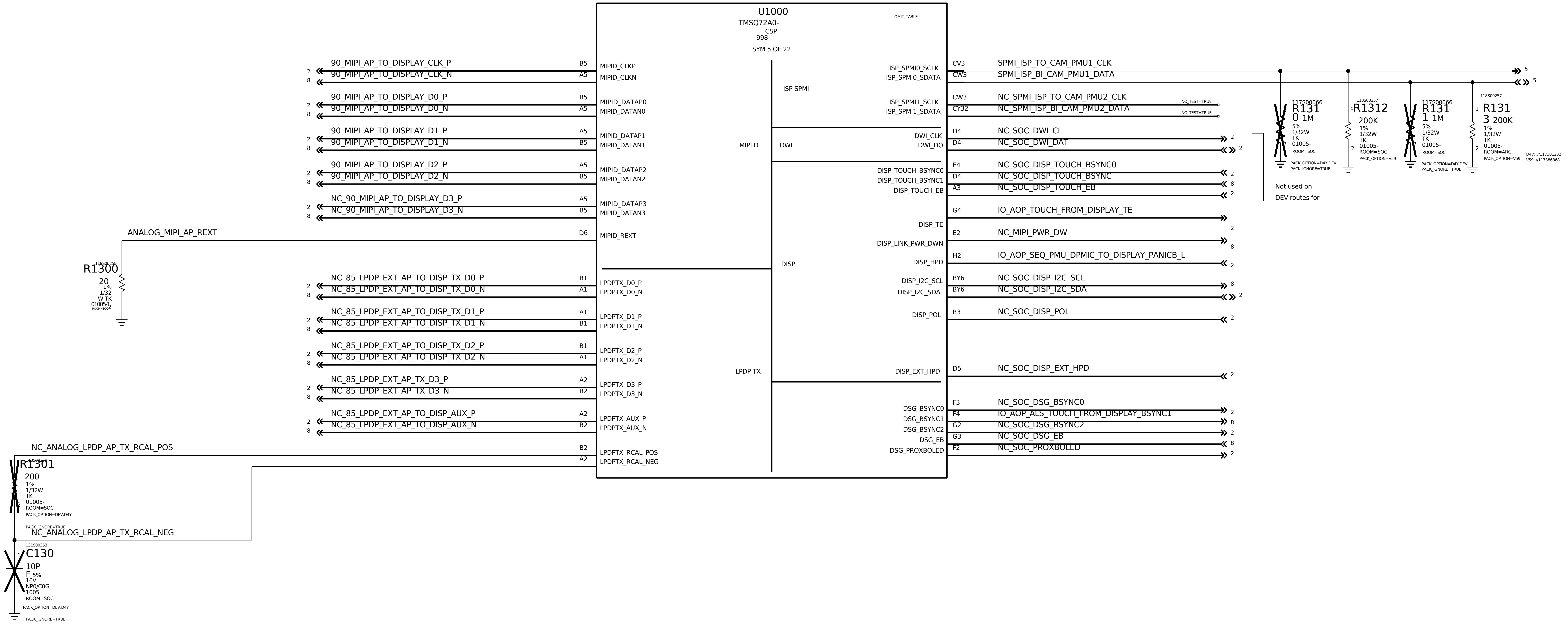
SOC: DISPLAY/ISP



U1000
TMSQ72A0-
CSP
998-
SYM 5 OF 22
OMIT_TABLE
MIPI D
DWI
DISP
LPDP TX
ISP SPMI
90_MIPI_AP_TO_DISPLAY_CLK_P B5 MIPID_CLKP
90_MIPI_AP_TO_DISPLAY_CLK_N A5 MIPID_CLKN
90_MIPI_AP_TO_DISPLAY_D0_P B5 MIPID_DATAP0
90_MIPI_AP_TO_DISPLAY_D0_N A5 MIPID_DATAN0
90_MIPI_AP_TO_DISPLAY_D1_P A5 MIPID_DATAP1
90_MIPI_AP_TO_DISPLAY_D1_N B5 MIPID_DATAN1
90_MIPI_AP_TO_DISPLAY_D2_P A5 MIPID_DATAP2
90_MIPI_AP_TO_DISPLAY_D2_N B5 MIPID_DATAN2
NC_90_MIPI_AP_TO_DISPLAY_D3_P A5 MIPID_DATAP3
NC_90_MIPI_AP_TO_DISPLAY_D3_N B5 MIPID_DATAN3
ANALOG_MIPI_AP_REXT D6 MIPID_REXT
R1300
20
1%
1/32
W TK
01005-1
ROOM=SOC
NC_85_LPDP_EXT_AP_TO_DISP_TX_D0_P B1 LPDPTX_D0_P
NC_85_LPDP_EXT_AP_TO_DISP_TX_D0_N A1 LPDPTX_D0_N
NC_85_LPDP_EXT_AP_TO_DISP_TX_D1_P A1 LPDPTX_D1_P
NC_85_LPDP_EXT_AP_TO_DISP_TX_D1_N B1 LPDPTX_D1_N
NC_85_LPDP_EXT_AP_TO_DISP_TX_D2_P B1 LPDPTX_D2_P
NC_85_LPDP_EXT_AP_TO_DISP_TX_D2_N A1 LPDPTX_D2_N
NC_85_LPDP_EXT_AP_TX_D3_P A2 LPDPTX_D3_P
NC_85_LPDP_EXT_AP_TX_D3_N B2 LPDPTX_D3_N
NC_85_LPDP_EXT_AP_TO_DISP_AUX_P A2 LPDPTX_AUX_P
NC_85_LPDP_EXT_AP_TO_DISP_AUX_N B2 LPDPTX_AUX_N
NC_ANALOG_LPDP_AP_TX_RCAL_POS B2 LPDPTX_RCAL_POS
NC_ANALOG_LPDP_AP_TX_RCAL_NEG A2 LPDPTX_RCAL_NEG
R1301
200
1%
1/32W
TK
01005-
ROOM=SOC
PACK_OPTION=DEV,D4Y
PACK_IGNORE=TRUE
C130
131S0353
10P
F 5%
16V
NP0/C0G
1005
ROOM=SOC
PACK_OPTION=DEV,D4Y
PACK_IGNORE=TRUE
ISP_SPMI0_SCLK CV3 SPMI_ISP_TO_CAM_PMU1_CLK
ISP_SPMI0_SDATA CW3 SPMI_ISP_BI_CAM_PMU1_DATA
ISP_SPMI1_SCLK CW3 NC_SPMI_ISP_TO_CAM_PMU2_CLK
ISP_SPMI1_SDATA CY32 NC_SPMI_ISP_BI_CAM_PMU2_DATA
NO_TEST=TRUE
DWI_CLK D4 NC_SOC_DWI_CL
DWI_DO D4 NC_SOC_DWI_DAT
DISP_TOUCH_BSYNC0 E4 NC_SOC_DISP_TOUCH_BSYNC0
DISP_TOUCH_BSYNC1 D4 NC_SOC_DISP_TOUCH_BSYNC
DISP_TOUCH_EB A3 NC_SOC_DISP_TOUCH_EB
DISP_TE G4 IO_AOP_TOUCH_FROM_DISPLAY_TE
DISP_LINK_PWR_DWN E2 NC_MIPI_PWR_DW
DISP_HPD H2 IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L
DISP_I2C_SCL BY6 NC_SOC_DISP_I2C_SCL
DISP_I2C_SDA BY6 NC_SOC_DISP_I2C_SDA
DISP_POL B3 NC_SOC_DISP_POL
DISP_EXT_HPD D5 NC_SOC_DISP_EXT_HPD
DSG_BSYNC0 F3 NC_SOC_DSG_BSYNC0
DSG_BSYNC1 F4 IO_AOP_ALS_TOUCH_FROM_DISPLAY_BSYNC1
DSG_BSYNC2 G2 NC_SOC_DSG_BSYNC2
DSG_EB G3 NC_SOC_DSG_EB
DSG_PROXBOLED F2 NC_SOC_PROXBOLED
Not used on
DEV routes for
R1310 117S00066 1M 5% 1/32W TK 01005- ROOM=SOC PACK_OPTION=D4Y,DEV PACK_IGNORE=TRUE
R1312 118S00257 200K 1% 1/32W TK 01005- ROOM=SOC PACK_OPTION=V59
R1311 117S00066 1M 5% 1/32W TK 01005- ROOM=SOC PACK_OPTION=D4Y,DEV PACK_IGNORE=TRUE
R1313 118S00257 200K 1% 1/32W TK 01005- ROOM=ARC PACK_OPTION=V59
D4y: (117381232
V59: (117386868

PAGE TITLE

SOC: Display/ISP

DRAWING NUMBER

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Apple

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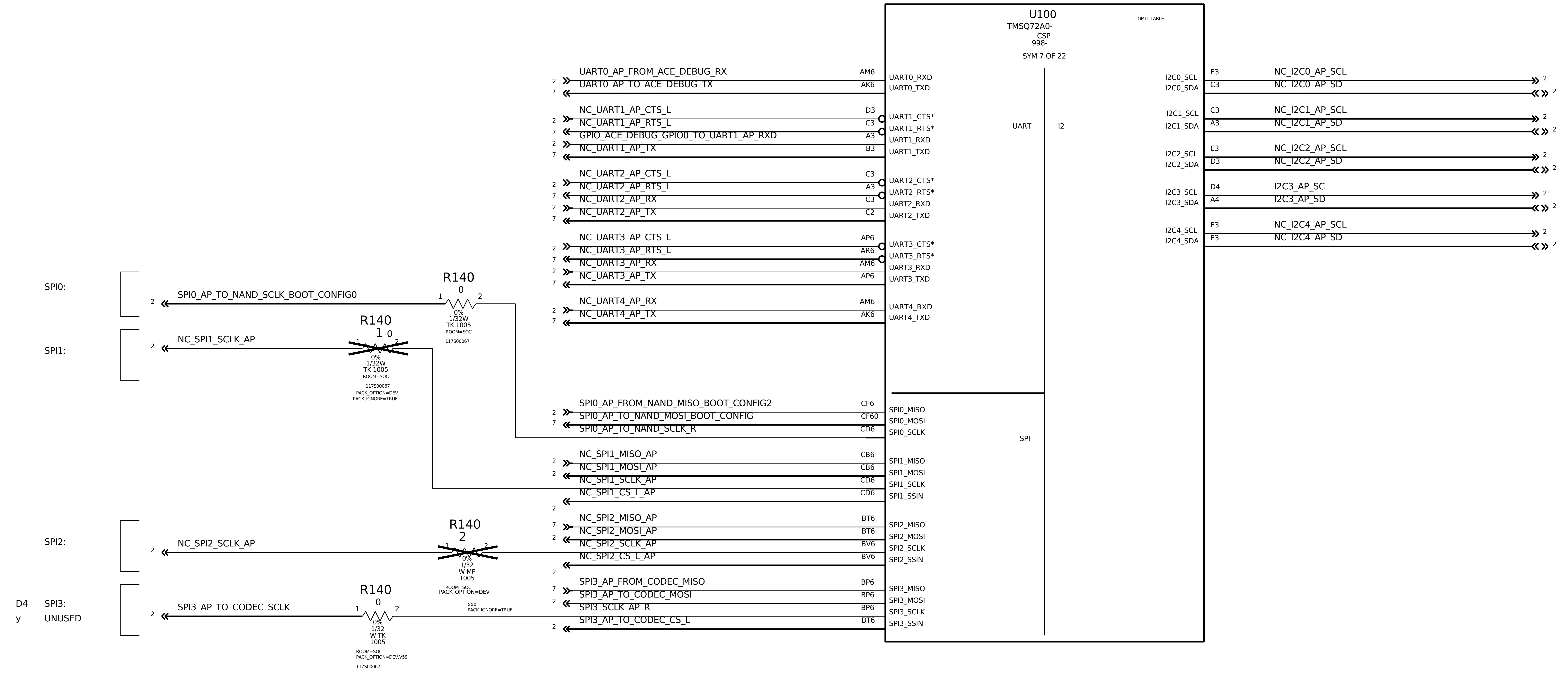
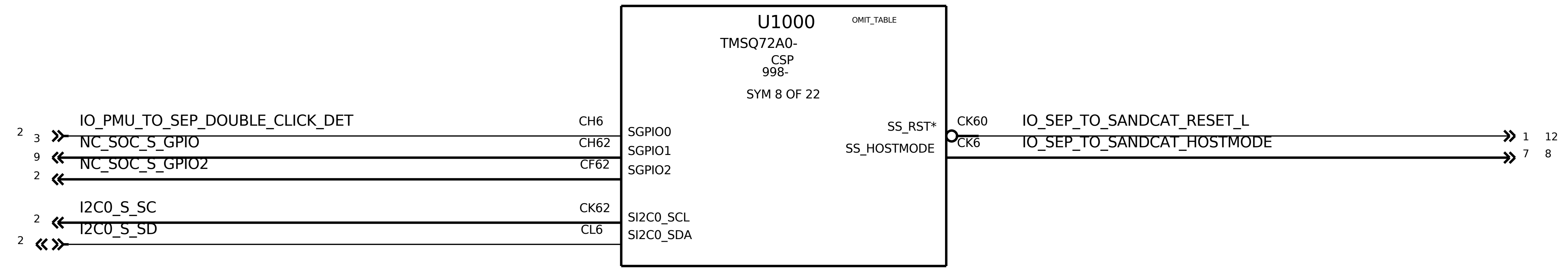
SOC: AP


U100
TMSQ72A0-
CSP
998-
SYM 7 OF 22
OMIT_TABLE
UART
I2
SPI
UART0_AP_FROM_ACE_DEBUG_RX AM6 UART0_RXD
UART0_AP_TO_ACE_DEBUG_TX AK6 UART0_TXD
NC_UART1_AP_CTS_L D3 UART1_CTS*
NC_UART1_AP_RTS_L C3 UART1_RTS*
GPIO_ACE_DEBUG_GPIO0_TO_UART1_AP_RXD A3 UART1_RXD
NC_UART1_AP_TX B3 UART1_TXD
NC_UART2_AP_CTS_L C3 UART2_CTS*
NC_UART2_AP_RTS_L A3 UART2_RTS*
NC_UART2_AP_RX C3 UART2_RXD
NC_UART2_AP_TX C2 UART2_TXD
NC_UART3_AP_CTS_L AP6 UART3_CTS*
NC_UART3_AP_RTS_L AR6 UART3_RTS*
NC_UART3_AP_RX AM6 UART3_RXD
NC_UART3_AP_TX AP6 UART3_TXD
NC_UART4_AP_RX AM6 UART4_RXD
NC_UART4_AP_TX AK6 UART4_TXD
SPI0_AP_FROM_NAND_MISO_BOOT_CONFIG2 CF6 SPI0_MISO
SPI0_AP_TO_NAND_MOSI_BOOT_CONFIG CF60 SPI0_MOSI
SPI0_AP_TO_NAND_SCLK_R CD6 SPI0_SCLK
NC_SPI1_MISO_AP CB6 SPI1_MISO
NC_SPI1_MOSI_AP CB6 SPI1_MOSI
NC_SPI1_SCLK_AP CD6 SPI1_SCLK
NC_SPI1_CS_L_AP CD6 SPI1_SSIN
NC_SPI2_MISO_AP BT6 SPI2_MISO
NC_SPI2_MOSI_AP BT6 SPI2_MOSI
NC_SPI2_SCLK_AP BV6 SPI2_SCLK
NC_SPI2_CS_L_AP BV6 SPI2_SSIN
SPI3_AP_FROM_CODEC_MISO BP6 SPI3_MISO
SPI3_AP_TO_CODEC_MOSI BP6 SPI3_MOSI
SPI3_SCLK_AP_R BP6 SPI3_SCLK
SPI3_AP_TO_CODEC_CS_L BT6 SPI3_SSIN
I2C0_SCL E3 NC_I2C0_AP_SCL
I2C0_SDA C3 NC_I2C0_AP_SD
I2C1_SCL C3 NC_I2C1_AP_SCL
I2C1_SDA A3 NC_I2C1_AP_SD
I2C2_SCL E3 NC_I2C2_AP_SCL
I2C2_SDA D3 NC_I2C2_AP_SD
I2C3_SCL D4 I2C3_AP_SC
I2C3_SDA A4 I2C3_AP_SD
I2C4_SCL E3 NC_I2C4_AP_SCL
I2C4_SDA E3 NC_I2C4_AP_SD
SPI0:
SPI0_AP_TO_NAND_SCLK_BOOT_CONFIG0
R140
0
1 2
0%
1/32W
TK 1005
ROOM=SOC
117S00067
SPI1:
NC_SPI1_SCLK_AP
R140
1 0
1 2
0%
1/32W
TK 1005
ROOM=SOC
117S00067
PACK_OPTION=DEV
PACK_IGNORE=TRUE
SPI2:
NC_SPI2_SCLK_AP
R140
2
1 2
0%
1/32
W MF
1005
ROOM=SOC
PACK_OPTION=DEV
XXX
PACK_IGNORE=TRUE
D4 SPI3:
y UNUSED
SPI3_AP_TO_CODEC_SCLK
R140
0
1 2
0%
1/32
W TK
1005
ROOM=SOC
PACK_OPTION=DEV,V59
117S00067


U1000
TMSQ72A0-
CSP
998-
SYM 8 OF 22
OMIT_TABLE
IO_PMU_TO_SEP_DOUBLE_CLICK_DET CH6 SGPIO0
NC_SOC_S_GPIO CH62 SGPIO1
NC_SOC_S_GPIO2 CF62 SGPIO2
I2C0_S_SC CK62 SI2C0_SCL
I2C0_S_SD CL6 SI2C0_SDA
SS_RST* CK60 IO_SEP_TO_SANDCAT_RESET_L
SS_HOSTMODE CK6 IO_SEP_TO_SANDCAT_HOSTMODE
1 12
7 8

AP SPI Map

BUS	DEVICE	MAX SPEED	LOCATION
SPI0 AP	S5E	40MH	MLB
SPI1 AP	BONGO	24MH	MLB
SPI2 AP	UNUSED	N/A	N/A
SPI3 AP	CODEC	24MH	MLB

V59

PAGE TITLE

SOC: Serial

Apple

DRAWING NUMBER

SIZE

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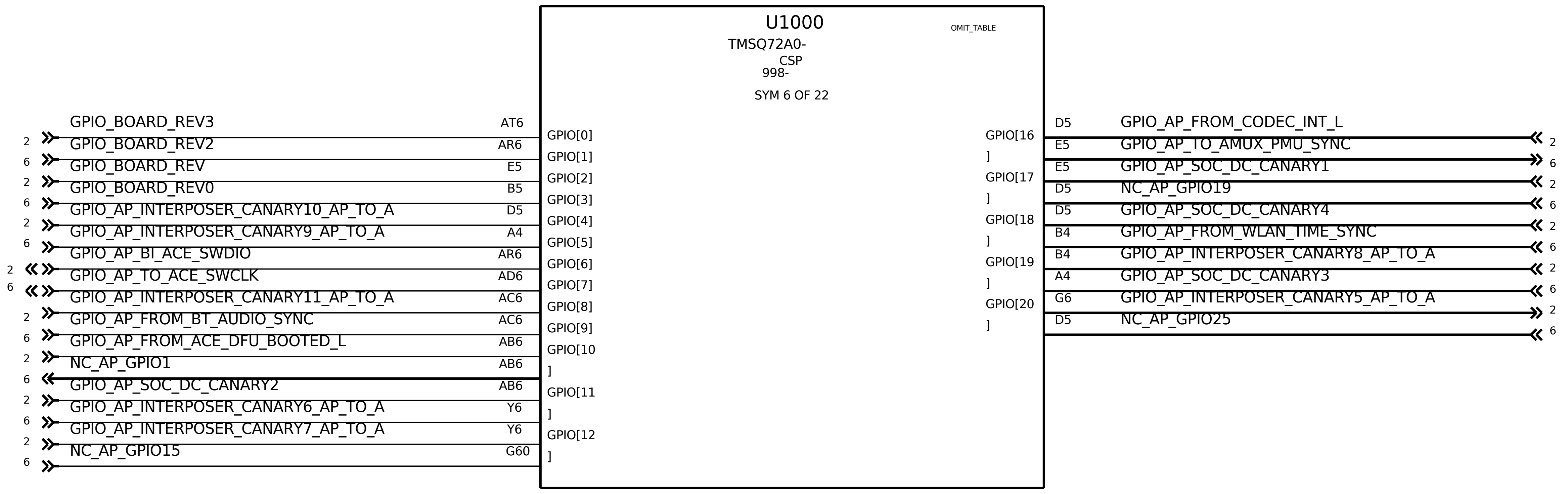
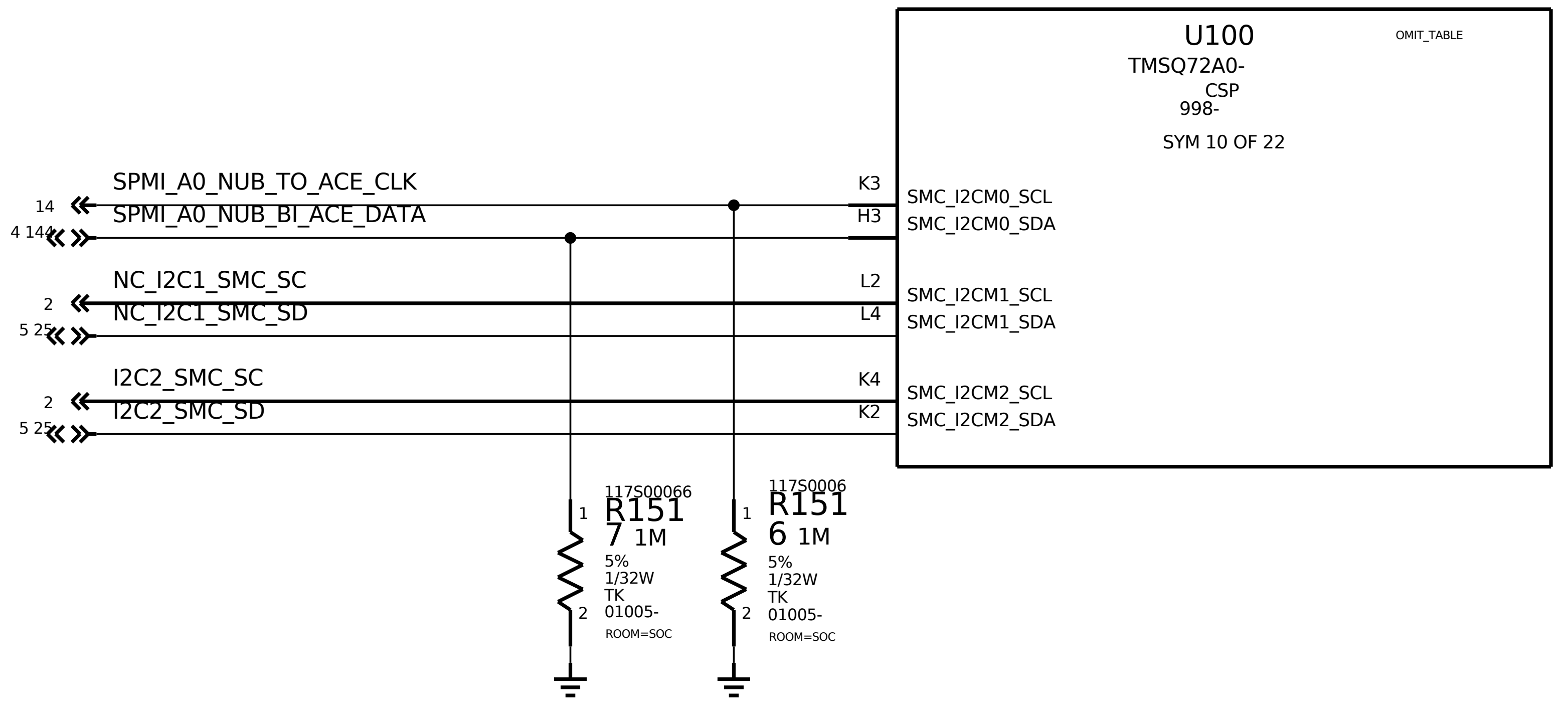
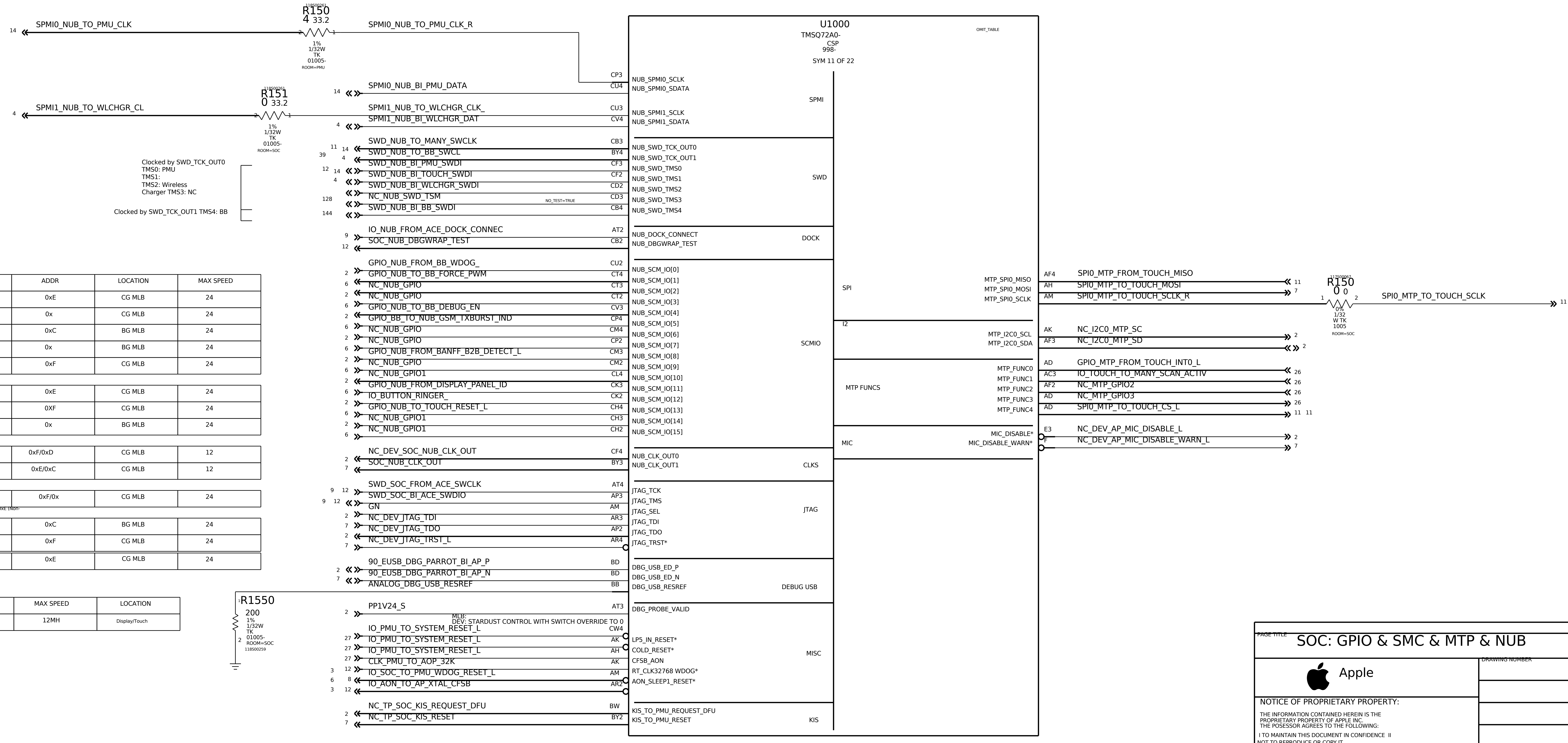

U1000
TMSQ72A0-
CSP
998-
SYM 6 OF 22
OMIT_TABLE
GPIO_BOARD_REV3 AT6 GPIO[0]
GPIO_BOARD_REV2 AR6 GPIO[1]
GPIO_BOARD_REV E5 GPIO[2]
GPIO_BOARD_REV0 B5 GPIO[3]
GPIO_AP_INTERPOSER_CANARY10_AP_TO_A D5 GPIO[4]
GPIO_AP_INTERPOSER_CANARY9_AP_TO_A A4 GPIO[5]
GPIO_AP_BI_ACE_SWDIO AR6 GPIO[6]
GPIO_AP_TO_ACE_SWCLK AD6 GPIO[7]
GPIO_AP_INTERPOSER_CANARY11_AP_TO_A AC6 GPIO[8]
GPIO_AP_FROM_BT_AUDIO_SYNC AC6 GPIO[9]
GPIO_AP_FROM_ACE_DFU_BOOTED_L AB6 GPIO[10]
NC_AP_GPIO1 AB6
GPIO_AP_SOC_DC_CANARY2 AB6 GPIO[11]
GPIO_AP_INTERPOSER_CANARY6_AP_TO_A Y6
GPIO_AP_INTERPOSER_CANARY7_AP_TO_A Y6 GPIO[12]
NC_AP_GPIO15 G60
GPIO[16] D5 GPIO_AP_FROM_CODEC_INT_L
E5 GPIO_AP_TO_AMUX_PMU_SYNC
GPIO[17] E5 GPIO_AP_SOC_DC_CANARY1
D5 NC_AP_GPIO19
GPIO[18] D5 GPIO_AP_SOC_DC_CANARY4
B4 GPIO_AP_FROM_WLAN_TIME_SYNC
GPIO[19] B4 GPIO_AP_INTERPOSER_CANARY8_AP_TO_A
A4 GPIO_AP_SOC_DC_CANARY3
GPIO[20] G6 GPIO_AP_INTERPOSER_CANARY5_AP_TO_A
D5 NC_AP_GPIO25

SOC:


U100
TMSQ72A0-
CSP
998-
SYM 10 OF 22
OMIT_TABLE
SPMI_A0_NUB_TO_ACE_CLK K3 SMC_I2CM0_SCL
SPMI_A0_NUB_BI_ACE_DATA H3 SMC_I2CM0_SDA
NC_I2C1_SMC_SC L2 SMC_I2CM1_SCL
NC_I2C1_SMC_SD L4 SMC_I2CM1_SDA
I2C2_SMC_SC K4 SMC_I2CM2_SCL
I2C2_SMC_SD K2 SMC_I2CM2_SDA
117S00066 R1517 1M 5% 1/32W TK 01005- ROOM=SOC
117S00066 R1516 1M 5% 1/32W TK 01005- ROOM=SOC

SOC: NUB &


U1000
TMSQ72A0-
CSP
998-
SYM 11 OF 22
OMIT_TABLE
SPMI0_NUB_TO_PMU_CLK
R1504 33.2 1% 1/32W TK 01005- ROOM=PMU
SPMI0_NUB_TO_PMU_CLK_R CP3 NUB_SPMI0_SCLK
SPMI0_NUB_BI_PMU_DATA CU4 NUB_SPMI0_SDATA
SPMI1_NUB_TO_WLCHGR_CL
R1510 33.2 1% 1/32W TK 01005- ROOM=SOC
SPMI1_NUB_TO_WLCHGR_CLK_ CU3 NUB_SPMI1_SCLK
SPMI1_NUB_BI_WLCHGR_DAT CV4 NUB_SPMI1_SDATA
SPMI
SWD_NUB_TO_MANY_SWCLK CB3 NUB_SWD_TCK_OUT0
SWD_NUB_TO_BB_SWCL BY4 NUB_SWD_TCK_OUT1
SWD_NUB_BI_PMU_SWDI CF3 NUB_SWD_TMS0
SWD_NUB_BI_TOUCH_SWDI CF2 NUB_SWD_TMS1
SWD_NUB_BI_WLCHGR_SWDI CD2 NUB_SWD_TMS2
NC_NUB_SWD_TSM CD3 NUB_SWD_TMS3
SWD_NUB_BI_BB_SWDI CB4 NUB_SWD_TMS4
NO_TEST=TRUE
SWD
Clocked by SWD_TCK_OUT0
TMS0: PMU
TMS1:
TMS2: Wireless
Charger TMS3: NC
Clocked by SWD_TCK_OUT1 TMS4: BB
IO_NUB_FROM_ACE_DOCK_CONNEC AT2 NUB_DOCK_CONNECT
SOC_NUB_DBGWRAP_TEST CB2 NUB_DBGWRAP_TEST
DOCK
GPIO_NUB_FROM_BB_WDOG_ CU2 NUB_SCM_IO[0]
GPIO_NUB_TO_BB_FORCE_PWM CT4 NUB_SCM_IO[1]
NC_NUB_GPIO CT3 NUB_SCM_IO[2]
NC_NUB_GPIO CT2 NUB_SCM_IO[3]
GPIO_NUB_TO_BB_DEBUG_EN CV3 NUB_SCM_IO[4]
GPIO_BB_TO_NUB_GSM_TXBURST_IND CP4 NUB_SCM_IO[5]
NC_NUB_GPIO CM4 NUB_SCM_IO[6]
NC_NUB_GPIO CP2 NUB_SCM_IO[7]
GPIO_NUB_FROM_BANFF_B2B_DETECT_L CM3 NUB_SCM_IO[8]
NC_NUB_GPIO CM2 NUB_SCM_IO[9]
NC_NUB_GPIO1 CL4 NUB_SCM_IO[10]
GPIO_NUB_FROM_DISPLAY_PANEL_ID CK3 NUB_SCM_IO[11]
IO_BUTTON_RINGER_ CK2 NUB_SCM_IO[12]
GPIO_NUB_TO_TOUCH_RESET_L CH4 NUB_SCM_IO[13]
NC_NUB_GPIO1 CH3 NUB_SCM_IO[14]
NC_NUB_GPIO1 CH2 NUB_SCM_IO[15]
SCMIO
NC_DEV_SOC_NUB_CLK_OUT CF4 NUB_CLK_OUT0
SOC_NUB_CLK_OUT BY3 NUB_CLK_OUT1
CLKS
SWD_SOC_FROM_ACE_SWCLK AT4 JTAG_TCK
SWD_SOC_BI_ACE_SWDIO AP3 JTAG_TMS
GN AM JTAG_SEL
NC_DEV_JTAG_TDI AR3 JTAG_TDI
NC_DEV_JTAG_TDO AP2 JTAG_TDO
NC_DEV_JTAG_TRST_L AR4 JTAG_TRST*
JTAG
90_EUSB_DBG_PARROT_BI_AP_P BD DBG_USB_ED_P
90_EUSB_DBG_PARROT_BI_AP_N BD DBG_USB_ED_N
ANALOG_DBG_USB_RESREF BB DBG_USB_RESREF
DEBUG USB
R1550 200 1% 1/32W TK 01005- ROOM=SOC 118S00259
PP1V24_S AT3 DBG_PROBE_VALID
MLB:
DEV: STARDUST CONTROL WITH SWITCH OVERRIDE TO 0
IO_PMU_TO_SYSTEM_RESET_L CW4
IO_PMU_TO_SYSTEM_RESET_L AK LP5_IN_RESET*
IO_PMU_TO_SYSTEM_RESET_L AH COLD_RESET*
CLK_PMU_TO_AOP_32K AK CFSB_AON
IO_SOC_TO_PMU_WDOG_RESET_L AM RT_CLK32768 WDOG*
IO_AON_TO_AP_XTAL_CFSB AR2 AON_SLEEP1_RESET*
MISC
NC_TP_SOC_KIS_REQUEST_DFU BW KIS_TO_PMU_REQUEST_DFU
NC_TP_SOC_KIS_RESET BY2 KIS_TO_PMU_RESET
KIS
SPI
MTP_SPI0_MISO AF4 SPI0_MTP_FROM_TOUCH_MISO
MTP_SPI0_MOSI AH SPI0_MTP_TO_TOUCH_MOSI
MTP_SPI0_SCLK AM SPI0_MTP_TO_TOUCH_SCLK_R
R1500 0 0% 1/32 W TK 1005 ROOM=SOC
SPI0_MTP_TO_TOUCH_SCLK
I2
MTP_I2C0_SCL AK NC_I2C0_MTP_SC
MTP_I2C0_SDA AF3 NC_I2C0_MTP_SD
MTP FUNCS
MTP_FUNC0 AD GPIO_MTP_FROM_TOUCH_INT0_L
MTP_FUNC1 AC3 IO_TOUCH_TO_MANY_SCAN_ACTIV
MTP_FUNC2 AF2 NC_MTP_GPIO2
MTP_FUNC3 AD NC_MTP_GPIO3
MTP_FUNC4 AD SPI0_MTP_TO_TOUCH_CS_L
MIC
MIC_DISABLE* E3 NC_DEV_AP_MIC_DISABLE_L
MIC_DISABLE_WARN* F NC_DEV_AP_MIC_DISABLE_WARN_L

SPMI Address

	BUS	DEVICE	ADDR	LOCATION	MAX SPEED
HEB BUS	SPMI0 AOP	WLAN/BT	0xE	CG MLB	24
	SPMI0 AOP	NFC Primary	0x	CG MLB	24
	SPMI0 AOP	NFC Fury	0xC	BG MLB	24
	SPMI0 AOP	BB	0x	BG MLB	24
	SPMI0 AOP	UWB	0xF	CG MLB	24
COEX BUS	SPMI1 AOP	WLAN/BT	0xE	CG MLB	24
	SPMI1 AOP	UWB	0XF	CG MLB	24
	SPMI1 AOP	BB	0x	BG MLB	24
	SPMI A0 NUB	Ace3	0xF/0xD	CG MLB	12
	SPMI A0 NUB	Ace3	0xE/0xC	CG MLB	12
	SPMI0 NUB	Bak	0xF/0x	CG MLB	24
	SPMI1 NUB	Shamise	0xC	BG MLB	24
	SPMI1 NUB	Stoneheng	0xF	CG MLB	24
	SPMI1 NUB	CHROMITE	0xE	CG MLB	24

Baku - 0xF (Privileged), 0xE (Non-

MTP SPI

BUS	DEVICE	MAX SPEED	LOCATION
SPI0 MTP	Touc	12MH	Display/Touch

PAGE TITLE
SOC: GPIO & SMC & MTP & NUB

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DRAWING NUMBER
SIZE

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SOC:
U1000
TMSQ72A0-
CSP
998-
SYM 9 OF 22
OMIT_TABLE
AOP I2S0
TopSpk,
AOP
I2S1 LP
AOP
I2S2 HP
AOP
Arc, Hall, Flicker
AOP
I2S4
AOP
I2S5
I2S0_AOP_FROM_SPKRAMP_TOP_BOT_DIN
I2S0_AOP_TO_SPKRAMP_TOP_BOT_DOUT
I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK
I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK
I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK
PACK_OPTION=MLB
R162 7
R162 10
ROOM=SOC
I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK_R
I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK_R
I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK
AOP_I2S0_DIN
AOP_I2S0_DOUT
AOP_I2S0_BCLK
AOP_I2S0_LRCK
AOP_I2S0_MCK
I2S1_AOP_FROM_CODEC_ASP1_DI
I2S1_AOP_TO_CODEC_ASP1_DOU
I2S1_AOP_FROM_CODEC_ASP1_BCLK
I2S1_AOP_FROM_CODEC_ASP1_LRCLK
I2S1_AOP_TO_CODEC_MCLK1_
I2S1_AOP_TO_CODEC_MCLK
R160 3
AOP_I2S1_DIN
AOP_I2S1_DOUT
AOP_I2S1_BCLK
AOP_I2S1_LRCK
AOP_I2S1_MCK
I2S2_AOP_FROM_CODEC_ASP2_DI
I2S2_AOP_TO_CODEC_ASP2_DOU
I2S2_AOP_TO_CODEC_ASP2_BCLK
I2S2_AOP_TO_CODEC_ASP2_LRCLK
GPIO_AOP_TO_SPKRAMP_TOP_RESET_L
AOP_I2S2_DIN
AOP_I2S2_DOUT
AOP_I2S2_BCLK
AOP_I2S2_LRCK
AOP_I2S2_MCK
I2S3_AOP_FROM_ARCAMP_CODEC_ASP3_DIN
I2S3_AOP_TO_ARCAMP_CODEC_ASP3_DOUT
I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK
I2S3_AOP_TO_ARCAMP_CODEC_ASP3_LRCLK
AOP_I2S3_DIN
AOP_I2S3_DOUT
AOP_I2S3_BCLK
AOP_I2S3_LRCK
NC_I2S4_AOP_DI
NC_I2S4_AOP_DOU
NC_I2S4_AOP_BCLK
NC_I2S4_AOP_LRCK
AOP_I2S4_DIN
AOP_I2S4_DOUT
AOP_I2S4_BCLK
AOP_I2S4_LRCK
NC_I2S5_AOP_DI
NC_I2S5_AOP_DOU
NC_I2S5_AOP_BCLK
NC_I2S5_AOP_LRCK
AOP_I2S5_DIN
AOP_I2S5_DOUT
AOP_I2S5_BCLK
AOP_I2S5_LRCK
I2
SCM
AOP_SCM_IO[0] GPIO_SCM_AOP_FROM_IMU_DATARDY
AOP_SCM_IO[1] GPIO_AOP_TO_IMU_SPI_CS_L
AOP_SCM_IO[2] GPIO_SCM_AOP_FROM_COMPASS_INT
AOP_SCM_IO[3] GPIO_SCM_AOP_BI_PROX_INT_L
AOP_SCM_IO[4] GPIO_SCM_AOP_FROM_ALS_INT_L
AOP_SCM_IO[5] GPIO_AOP_TO_CODEC_RESET_L
AOP_SCM_IO[6] NC_AOP_FUNC
AOP_SCM_IO[7] NC_AOP_FUNC
AOP_SCM_IO[8] NC_AOP_FUNC
AOP_SCM_IO[9] GPIO_SCM_AOP_TO_GNSS_SPI_CS_L
AOP_SCM_IO[10] NC_AOP_FUNC1
AOP_SCM_IO[11] NC_AOP_FUNC1
AOP_SCM_IO[12] GPIO_AOP_FROM_GNSS_HOST_REQ
AOP_SCM_IO[13] NC_AOP_FUNC1
AOP_SCM_IO[14] GPIO_AOP_TO_BBMUX_SEL
AOP_SCM_IO[15] GPIO_AOP_FROM_BARO_INT_L
I2
AOP_I2CM0_SCL I2C0_AOP_SC
AOP_I2CM0_SDA I2C0_AOP_SD
AOP_I2CM1_SCL I2C1_AOP_SC
AOP_I2CM1_SDA I2C1_AOP_SD
AOP_I2CM2_SCL I2C2_AOP_SC
AOP_I2CM2_SDA I2C2_AOP_SD
AOP_I2CM3_SCL I2C3_AOP_SC
AOP_I2CM3_SDA I2C3_AOP_SD
SPI
AOP_SPI0_SCLK SPI0_AOP_TO_IMU_SCLK_R
AOP_SPI0_MISO SPI0_AOP_FROM_IMU_MISO
AOP_SPI0_MOSI SPI0_AOP_TO_IMU_MOSI
R160 33.
SPI0_AOP_TO_IMU_SCLK
AOP_SPI1_SCLK SPI1_AOP_TO_GNSS_SCLK_R
AOP_SPI1_MISO SPI1_AOP_FROM_GNSS_MISO
AOP_SPI1_MOSI SPI1_AOP_TO_GNSS_MOSI
R160 33.
SPI1_AOP_TO_GNSS_SCLK
Note:
AOP1
D4y: UWB
SPMI/UART
AOP_SPMI0_SCLK SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK_R
AOP_SPMI0_SDATA SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA
R162 2
SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
R1625 1M 5%
R1629 165K 1%
R1624 165K 1%
AOP_SPMI1_SCLK SPMI1_COEX_AOP_TO_BB_WLAN_CLK_R
AOP_SPMI1_SDATA SPMI1_COEX_AOP_BI_BB_WLAN_DATA
R162 3
SPMI1_COEX_AOP_TO_BB_WLAN_CLK
R1621 1M 5%
R1628 165K 1%
R1620 165K 1%
PACK_OPTION=D4Y
PACK_OPTION=V59
PACK_IGNORE=TRUE
AOP_UART2_TXD NC_AOP_UART2_TX
AOP_UART2_RXD NC_AOP_UART2_RX
I2S0_AOP_FROM_SPKRAMP_TOP_BOT_DIN
R160 6
PACK_OPTION=DEV
I2S0_AOP_TO_SPKRAMP_TOP_BOT_DOUT
R160 7
PACK_OPTION=DEV
I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK
R160 4
I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK_R
PACK_OPTION=DEV
I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK
R160 5
I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK_R
PACK_OPTION=DEV
I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK
R160 8
PACK_OPTION=DEV

PAGE TITLE

SOC: AOP

Apple

DRAWING NUMBER

SIZE

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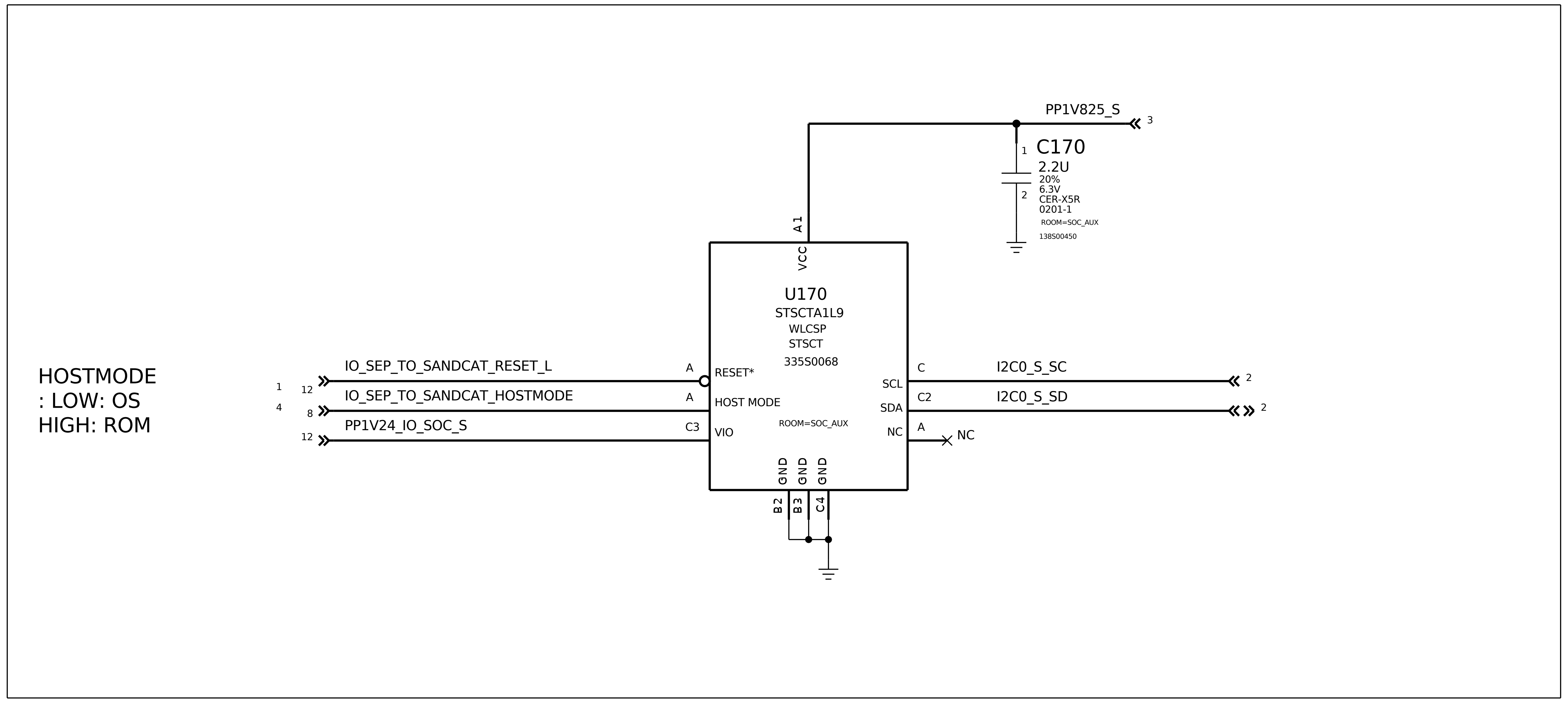
PP1V825_S
3
C170
1
2
2.2U
20%
6.3V
CER-X5R
0201-1
ROOM=SOC_AUX
138S00450
A1
VCC
U170
STSCTA1L9
WLCSP
STSCT
335S0068
HOSTMODE
: LOW: OS
HIGH: ROM
IO_SEP_TO_SANDCAT_RESET_L
IO_SEP_TO_SANDCAT_HOSTMODE
PP1V24_IO_SOC_S
1
12
4
8
12
A
A
C3
RESET*
HOST MODE
VIO
ROOM=SOC_AUX
SCL
SDA
NC
C
C2
A
I2C0_S_SC
I2C0_S_SD
2
2
NC
GND
GND
GND
B2
B3
C4

AWL EEPROM REMOVED

PAGE TITLE

SOC: Extra Memory

Apple

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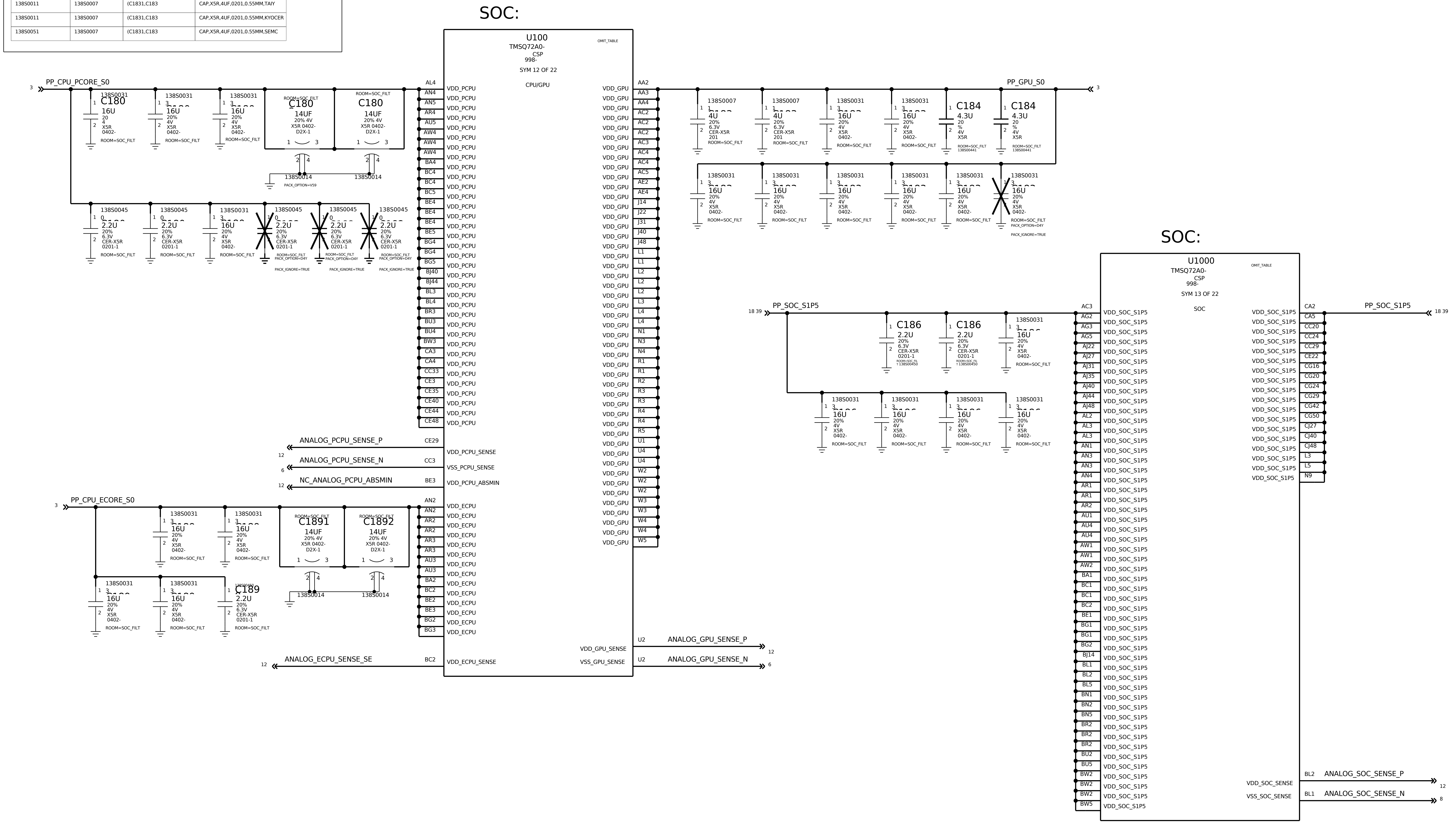
4uF 0201 Capacitors (single-source

RefDes in () are singled-sourced from Murata

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0011	138S0007	(C1831,C183	CAP,X5R,4UF,0201,0.55MM,TAIY
138S0011	138S0007	(C1831,C183	CAP,X5R,4UF,0201,0.55MM,KYOCER
138S0051	138S0007	(C1831,C183	CAP,X5R,4UF,0201,0.55MM,SEMC


SOC:
U100
TMSQ72A0-CSP
998-
SYM 12 OF 22
CPU/GPU
OMIT_TABLE
PP_CPU_PCORE_S0
PP_GPU_S0
PP_CPU_ECORE_S0
C180
C184
C1891
C1892
C189
C186
138S0031
138S0045
138S0007
138S0014
16U
2.2U
14UF
4U
4.3U
ROOM=SOC_FILT
PACK_OPTION=V59
PACK_OPTION=D4Y
PACK_IGNORE=TRUE
VDD_PCPU
VDD_GPU
VDD_ECPU
ANALOG_PCPU_SENSE_P
ANALOG_PCPU_SENSE_N
NC_ANALOG_PCPU_ABSMIN
VDD_PCPU_SENSE
VSS_PCPU_SENSE
VDD_PCPU_ABSMIN
ANALOG_ECPU_SENSE_SE
VDD_ECPU_SENSE
VDD_GPU_SENSE
VSS_GPU_SENSE
ANALOG_GPU_SENSE_P
ANALOG_GPU_SENSE_N
SOC:
U1000
TMSQ72A0-CSP
998-
SYM 13 OF 22
SOC
PP_SOC_S1P5
VDD_SOC_S1P5
VDD_SOC_SENSE
VSS_SOC_SENSE
ANALOG_SOC_SENSE_P
ANALOG_SOC_SENSE_N

PAGE TITLE
SOC: Power (CPU/GPU & SOC)

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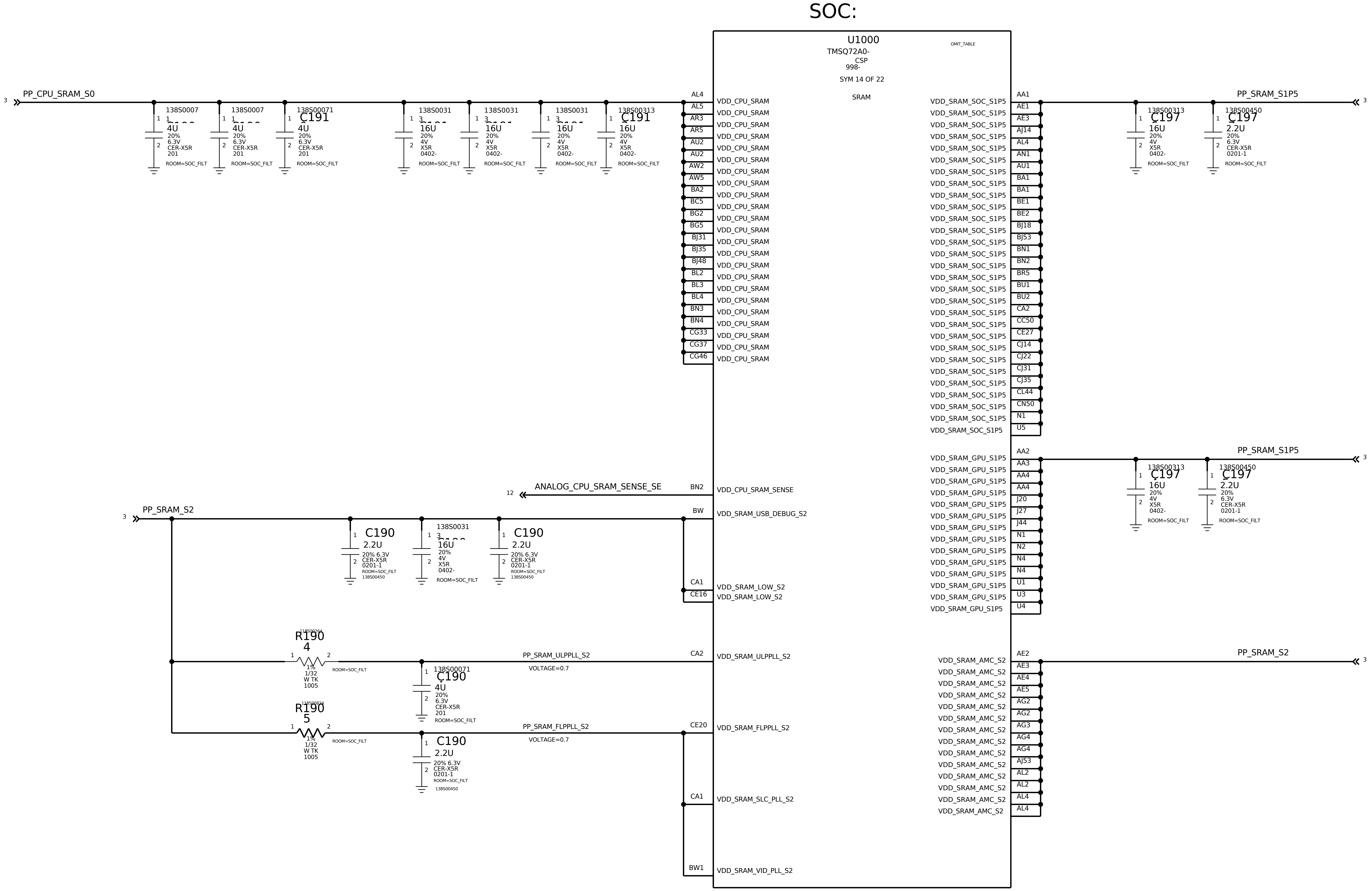
SOC:
U1000
TMSQ72A0-
CSP
998-
SYM 14 OF 22
SRAM
OMIT_TABLE
PP_CPU_SRAM_S0
138S0007
4U
20%
6.3V
CER-X5R
201
ROOM=SOC_FILT
138S00071
C191
138S0031
16U
4V
X5R
0402-
138S00313
AL4 AL5 AR3 AR5 AU2 AU2 AW2 AW5 BA2 BC5 BG2 BG5 BJ31 BJ35 BJ48 BL2 BL3 BL4 BN3 BN4 CG33 CG37 CG46
VDD_CPU_SRAM
BN2 VDD_CPU_SRAM_SENSE
ANALOG_CPU_SRAM_SENSE_SE
12
PP_SRAM_S2
BW VDD_SRAM_USB_DEBUG_S2
C190
2.2U
20% 6.3V
CER-X5R
0201-1
138S00450
CA1 VDD_SRAM_LOW_S2
CE16 VDD_SRAM_LOW_S2
R190
4
1%
1/32
W TK
1005
PP_SRAM_ULPPLL_S2
VOLTAGE=0.7
CA2 VDD_SRAM_ULPPLL_S2
R190
5
PP_SRAM_FLPPLL_S2
VOLTAGE=0.7
CE20 VDD_SRAM_FLPPLL_S2
CA1 VDD_SRAM_SLC_PLL_S2
BW1 VDD_SRAM_VID_PLL_S2
VDD_SRAM_SOC_S1P5
AA1 AE1 AE3 AJ14 AL4 AN1 AU1 BA1 BA1 BE1 BE2 BJ18 BJ53 BN1 BN2 BR5 BU1 BU2 CA2 CC50 CE27 CJ14 CJ22 CJ31 CJ35 CL44 CN50 N1 U5
PP_SRAM_S1P5
C197
2.2U
138S00450
VDD_SRAM_GPU_S1P5
AA2 AA3 AA4 AA4 J20 J27 J44 N1 N2 N4 N4 U1 U3 U4
PP_SRAM_S1P5
VDD_SRAM_AMC_S2
AE2 AE3 AE4 AE5 AG2 AG2 AG3 AG4 AG4 AJ53 AL2 AL2 AL4 AL4
PP_SRAM_S2
3

PAGE TITLE

SOC: Power (SRAM)

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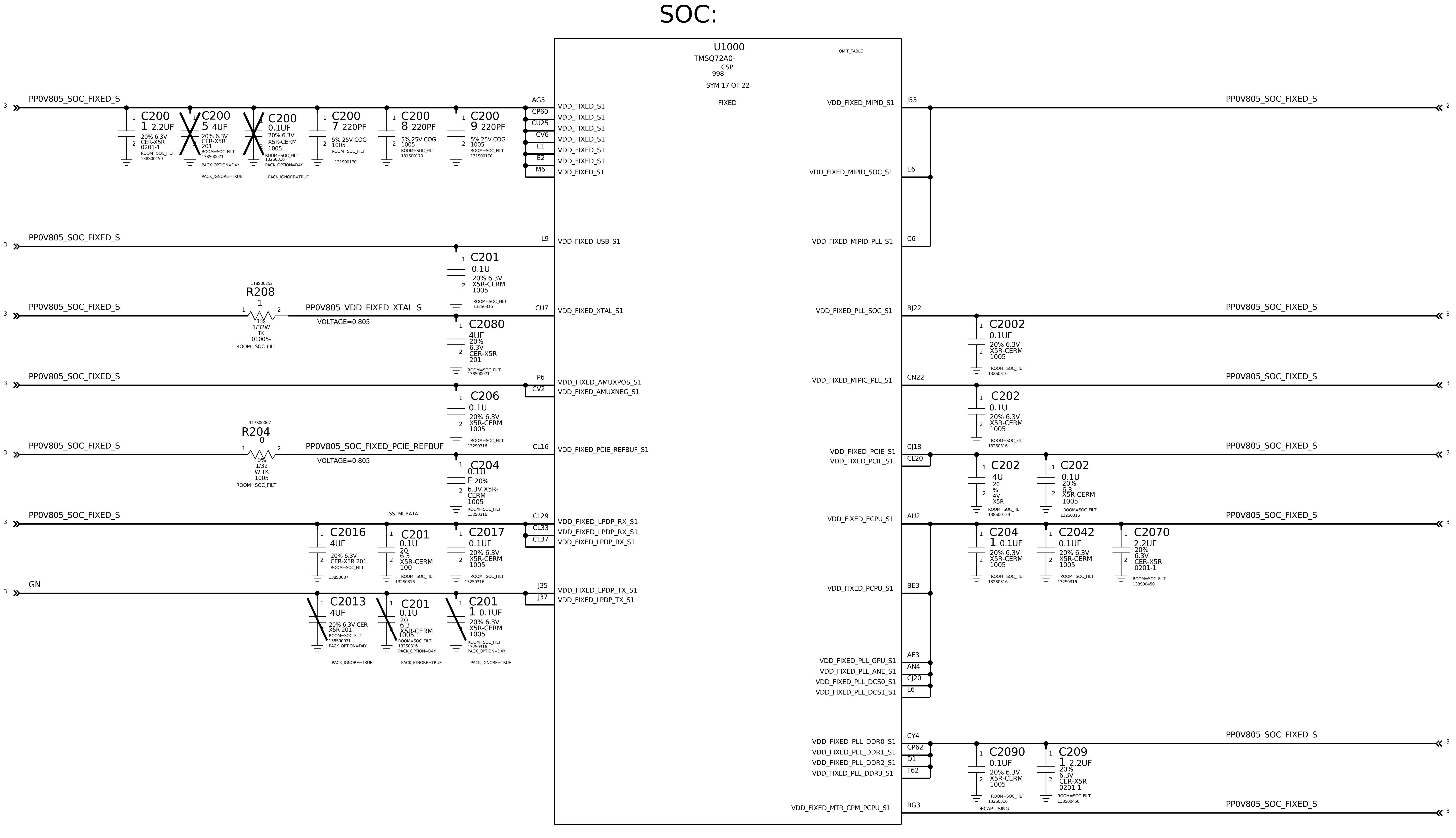
SOC:
U1000
TMSQ72A0-
CSP
998-
SYM 17 OF 22
OMIT_TABLE
FIXED
PP0V805_SOC_FIXED_S
3
AG5
CP60
CU25
CV6
E1
E2
M6
VDD_FIXED_S1
C2001 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=SOC_FILT 138S00450
C2005 4UF 20% 6.3V CER-X5R 201 ROOM=SOC_FILT 138S00071 PACK_OPTION=D4Y PACK_IGNORE=TRUE
C2006 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316 PACK_OPTION=D4Y PACK_IGNORE=TRUE
C2007 220PF 5% 25V COG 1005 ROOM=SOC_FILT 131S00170
C2008 220PF 5% 25V COG 1005 ROOM=SOC_FILT 131S00170
C2009 220PF 5% 25V COG 1005 ROOM=SOC_FILT 131S00170
L9
VDD_FIXED_USB_S1
C201 0.1U 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316
118S00252
R208 1 1% 1/32W TK 01005- ROOM=SOC_FILT
PP0V805_VDD_FIXED_XTAL_S
VOLTAGE=0.805
CU7
VDD_FIXED_XTAL_S1
C2080 4UF 20% 6.3V CER-X5R 201 ROOM=SOC_FILT 138S00071
P6
CV2
VDD_FIXED_AMUXPOS_S1
VDD_FIXED_AMUXNEG_S1
C206 0.1U 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316
117S00067
R204 0 0% 1/32 W TK 1005 ROOM=SOC_FILT
PP0V805_SOC_FIXED_PCIE_REFBUF
VOLTAGE=0.805
CL16
VDD_FIXED_PCIE_REFBUF_S1
C204 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316
[SS] MURATA
CL29
CL33
CL37
VDD_FIXED_LPDP_RX_S1
C2016 4UF 20% 6.3V CER-X5R 201 ROOM=SOC_FILT 138S0007
C201 0.1U 20 6.3 X5R-CERM 100 ROOM=SOC_FILT 132S0316
C2017 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316
GN
J35
J37
VDD_FIXED_LPDP_TX_S1
C2013 4UF 20% 6.3V CER-X5R 201 ROOM=SOC_FILT 138S00071 PACK_OPTION=D4Y PACK_IGNORE=TRUE
C201 0.1U 20 6.3 X5R-CERM 1005 ROOM=SOC_FILT 132S0316 PACK_OPTION=D4Y PACK_IGNORE=TRUE
C2011 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316 PACK_OPTION=D4Y PACK_IGNORE=TRUE
VDD_FIXED_MIPID_S1
J53
VDD_FIXED_MIPID_SOC_S1
E6
VDD_FIXED_MIPID_PLL_S1
C6
PP0V805_SOC_FIXED_S
2
VDD_FIXED_PLL_SOC_S1
BJ22
C2002 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316
VDD_FIXED_MIPIC_PLL_S1
CN22
C202 0.1U 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316
VDD_FIXED_PCIE_S1
CJ18
CL20
C202 4U 20% 4V X5R ROOM=SOC_FILT 138S00139
C202 0.1U 20% 6.3 X5R-CERM 1005 ROOM=SOC_FILT 132S0316
VDD_FIXED_ECPU_S1
AU2
C2041 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316
C2042 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316
C2070 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=SOC_FILT 138S00450
VDD_FIXED_PCPU_S1
BE3
AE3
AN4
CJ20
L6
VDD_FIXED_PLL_GPU_S1
VDD_FIXED_PLL_ANE_S1
VDD_FIXED_PLL_DCS0_S1
VDD_FIXED_PLL_DCS1_S1
CY4
CP62
D1
F62
VDD_FIXED_PLL_DDR0_S1
VDD_FIXED_PLL_DDR1_S1
VDD_FIXED_PLL_DDR2_S1
VDD_FIXED_PLL_DDR3_S1
C2090 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=SOC_FILT 132S0316
DECAP USING
C2091 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=SOC_FILT 138S00450
VDD_FIXED_MTR_CPM_PCPU_S1
BG3

PAGE TITLE

SOC: Power (Fixed)

Apple

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SUBSYSTEM SPECIFIC BOM TABLES

4uF 0201 Capacitors (single-source

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ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMEN
138S0011	138S0007	(C2128,C2137,C2180-C2183,C2185-C2188,C2190-	CAP,X5R,4UF,0201,0.55MM,TAIY
138S0011	138S0007	(C2128,C2137,C2180-C2183,C2185-C2188,C2190-	CAP,X5R,4UF,0201,0.55MM,KYOCER
138S0051	138S0007	(C2128,C2137,C2180-C2183,C2185-C2188,C2190-	CAP,X5R,4UF,0201,0.55MM,SEMC

SOC:
U100
TMSQ72A0-CSP
998-
OMIT_TABLE
SYM 15 OF 22
LOW/AVE/DISP
PP_VDD_LOW_S
PLACE AT SOC BALLS
C212 0.1U 20% 6.3V X5R-CERM 1005
C210 2.2U
C210 2.2U 20% 6.3V CER-X5R 0201-1
ROOM=SOC_FILT
BL1 BR1 BR1 BU1 BW1 BW1 CC16 CE14
VDD_LOW_S2
AA1 AC1 AE1 AG1 AJ18 AL1 AL1 W1
VDD_DISP_S1
PP_DISP_S1
138S0031 16U 20% 4V X5R 0402-
138S0007 4U 20% 6.3V CER-X5R 201
138S0045 2.2U 20% 6.3V CER-X5R 0201-1
PACK_OPTION=D4Y
PACK_IGNORE=TRUE
PP_AVE_S0
CJ44 CL42 CL46 CL50 CN40 CN44 CN48
VDD_AVE
VDD_DISP_SENSE
AL1
ANALOG_DISP_SENSE_SE
C212 9
20% 4V X5R 0402- D2X-1
SOC:
U100
TMSQ72A0-CSP
998-
OMIT_TABLE
SYM 16 OF 22
DDR
PP0V5_VDDQL_S
C219 4U 20% 6.3V CER-X5R 201
ROOM=SOC_FILT 138S0071
PLACE CAPS ON SOC CORNERS
BM BV CA9 CL CN9 CT CV
VDDQL_DDR0_S1
BB6 BG6 BP6 CA5 CH63 CL63 CN55 CU63
VDDQL_DDR1_S1
AF AG9 AP AY D L P W
VDDQL_DDR2_S1
AC5 AF63 AK6 AP6 D6 G63 L5 M6
VDDQL_DDR3_S1
ANALOG_VDDQL_SENSE_SE
K6
VDDQL_SENSE
PP_DCS_S
C218 4U 20% 6.3V CER-X5R 201
CC9 CL9
VDD_DCS_DDR0_S1
CC55 CL55
VDD_DCS_DDR1_S1
AJ9 U9
VDD_DCS_DDR2_S1
AA5 H6 N5
VDD_DCS_DDR3_S1
ANALOG_DCS_SENSE_SE
ANALOG_DDR_SENSE_SE
H6
VSS_DDR_SENSE
H62 IS
BF BF2 BK BY CD CH CP CR2 CU CW3
VDD2H_DDR0_S2
BD6 BF62 BK6 BV6 BY6 CD6 CR63 CU62 CV6
VDD2H_DDR1_S2
AB AD AK AV AY3 D H V
VDD2H_DDR2_S2
AC6 AM6 AT6 AV6 D6 D6 K6 T6 Y6
VDD2H_DDR3_S2
PP1V1_VDD2H_DDR_S
C218 4U 20% 6.3V CER-X5R 201
C218 16U 20 4 X5R 0402-1 138S0313
PP1V825_S
BG2 CW2
VDD1_DDR0_S2
BH6 CW6
VDD1_DDR1_S2
AT C2
VDD1_DDR2_S2
AT6 C6
VDD1_DDR3_S2
C219 0.22U 10% 6.3V CER-X5R 1005
PP1V1_AMPH_S
CC1 CL1
VDD_AMPH_DDR0_S2
CC53 CL53
VDD_AMPH_DDR1_S2
AG1 W1
VDD_AMPH_DDR2_S2
AA5 N5
VDD_AMPH_DDR3_S2
C217 2.2U 20% 6.3V CER-X5R 0201-1
ROOM=SOC_FILT 138S0450
VDD_AMPH_SENSE
K6
ANALOG_AMPH_SENSE_SE
3
12

PAGE TITLE

SOC: Power (DDR & AOP/AVE/ISP/USB)

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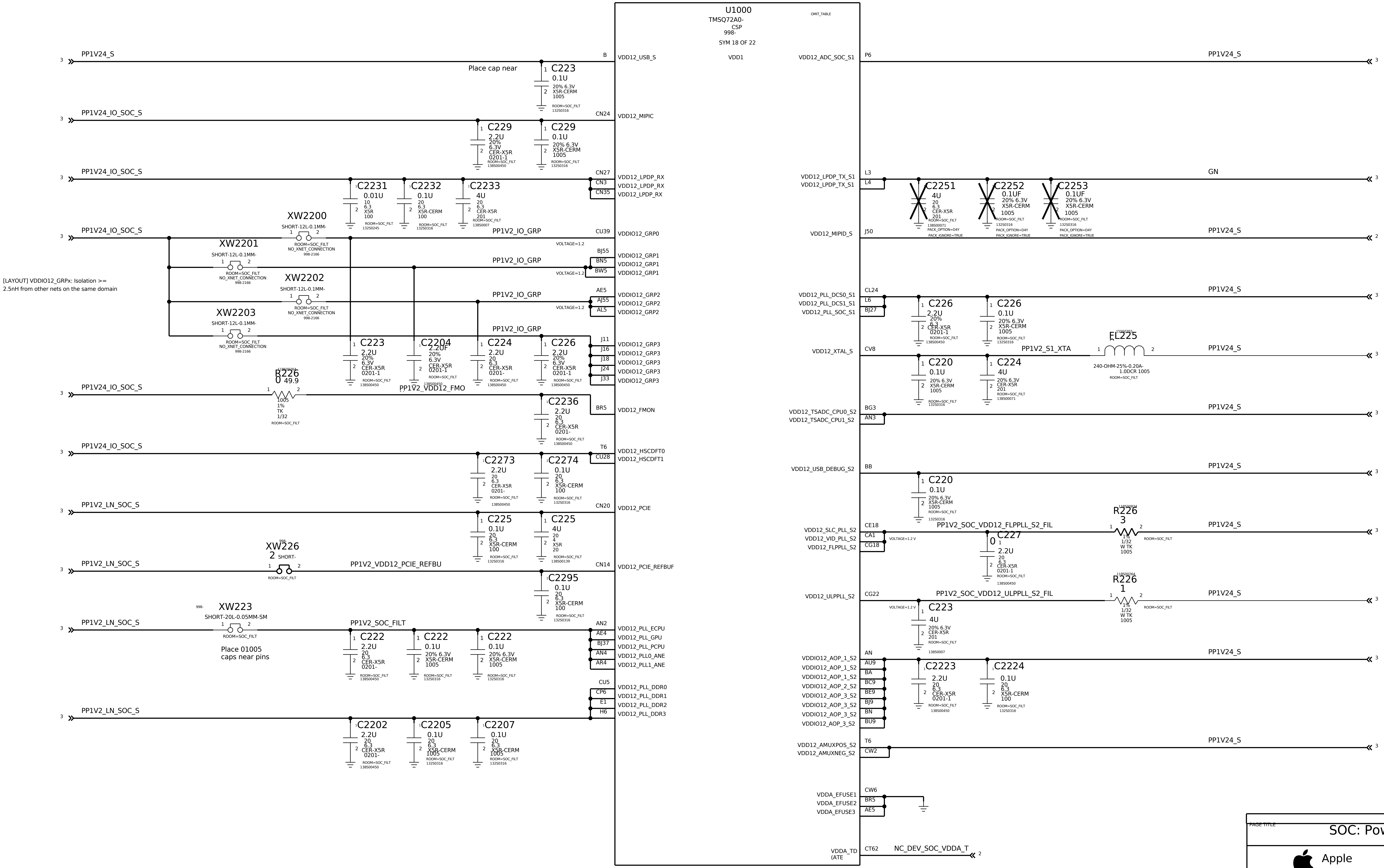
SOC:


U1000
TMSQ72A0-
CSP
998-
SYM 18 OF 22
OMIT_TABLE
VDD1
PP1V24_S
PP1V24_IO_SOC_S
PP1V2_LN_SOC_S
Place cap near
C223 0.1U 20% 6.3V X5R-CERM 1005
C229 2.2U 20% 6.3V CER-X5R 0201-1
C229 0.1U 20% 6.3V X5R-CERM 1005
C2231 0.01U
C2232 0.1U
C2233 4U
XW2200 SHORT-12L-0.1MM-
XW2201 SHORT-12L-0.1MM-
XW2202 SHORT-12L-0.1MM-
XW2203 SHORT-12L-0.1MM-
ROOM=SOC_FILT
NO_XNET_CONNECTION
998-2166
[LAYOUT] VDDIO12_GRPx: Isolation >=
2.5nH from other nets on the same domain
PP1V2_IO_GRP
VOLTAGE=1.2
C223 2.2U
C2204 2.2UF
C224 2.2U
C226 2.2U
R226 0 49.9 1005 1% TK 1/32
PP1V2_VDD12_FMO
C2236 2.2U
C2273 2.2U
C2274 0.1U
C225 0.1U
C225 4U
XW226 2 SHORT-
PP1V2_VDD12_PCIE_REFBU
C2295 0.1U
XW223 SHORT-20L-0.05MM-SM
Place 01005
caps near pins
PP1V2_SOC_FILT
C222 2.2U
C222 0.1U
C222 0.1U
C2202 2.2U
C2205 0.1U
C2207 0.1U
B VDD12_USB_S
CN24 VDD12_MIPIC
CN27 VDD12_LPDP_RX
CN3 VDD12_LPDP_RX
CN35 VDD12_LPDP_RX
CU39 VDDIO12_GRP0
BJ55 VDDIO12_GRP1
BN5 VDDIO12_GRP1
BW5 VDDIO12_GRP1
AE5 VDDIO12_GRP2
AJ55 VDDIO12_GRP2
AL5 VDDIO12_GRP2
J11 J16 J18 J24 J33 VDDIO12_GRP3
BR5 VDD12_FMON
T6 VDD12_HSCDFT0
CU28 VDD12_HSCDFT1
CN20 VDD12_PCIE
CN14 VDD12_PCIE_REFBUF
AN2 VDD12_PLL_ECPU
AE4 VDD12_PLL_GPU
BJ37 VDD12_PLL_PCPU
AN4 VDD12_PLL0_ANE
AR4 VDD12_PLL1_ANE
CU5 VDD12_PLL_DDR0
CP6 VDD12_PLL_DDR1
E1 VDD12_PLL_DDR2
H6 VDD12_PLL_DDR3
P6 VDD12_ADC_SOC_S1
L3 VDD12_LPDP_TX_S1
L4 VDD12_LPDP_TX_S1
GN
C2251 4U
C2252 0.1UF
C2253 0.1UF
PACK_OPTION=D4Y
PACK_IGNORE=TRUE
J50 VDD12_MIPID_S
CL24 VDD12_PLL_DCS0_S1
L6 VDD12_PLL_DCS1_S1
BJ27 VDD12_PLL_SOC_S1
C226 2.2U
C226 0.1U
CV8 VDD12_XTAL_S
PP1V2_S1_XTA
FL225 240-OHM-25%-0.20A-1.0DCR 1005
C220 0.1U
C224 4U
BG3 VDD12_TSADC_CPU0_S2
AN3 VDD12_TSADC_CPU1_S2
BB VDD12_USB_DEBUG_S2
C220 0.1U
CE18 VDD12_SLC_PLL_S2
CA1 VDD12_VID_PLL_S2
CG18 VDD12_FLPPLL_S2
VOLTAGE=1.2 V
PP1V2_SOC_VDD12_FLPPLL_S2_FIL
C227 0 2.2U
R226 3 1% 1/32 W TK 1005
CG22 VDD12_ULPPLL_S2
PP1V2_SOC_VDD12_ULPPLL_S2_FIL
C223 4U
R226 1 1% 1/32 W TK 1005
AN VDDIO12_AOP_1_S2
AU9 VDDIO12_AOP_1_S2
BA VDDIO12_AOP_1_S2
BC9 VDDIO12_AOP_2_S2
BE9 VDDIO12_AOP_3_S2
BJ9 VDDIO12_AOP_3_S2
BN VDDIO12_AOP_3_S2
BU9 VDDIO12_AOP_3_S2
C2223 2.2U
C2224 0.1U
T6 VDD12_AMUXPOS_S2
CW2 VDD12_AMUXNEG_S2
CW6 VDDA_EFUSE1
BR5 VDDA_EFUSE2
AE5 VDDA_EFUSE3
CT62 VDDA_TD (ATE
NC_DEV_SOC_VDDA_T

PAGE TITLE

SOC: Power (1V2)

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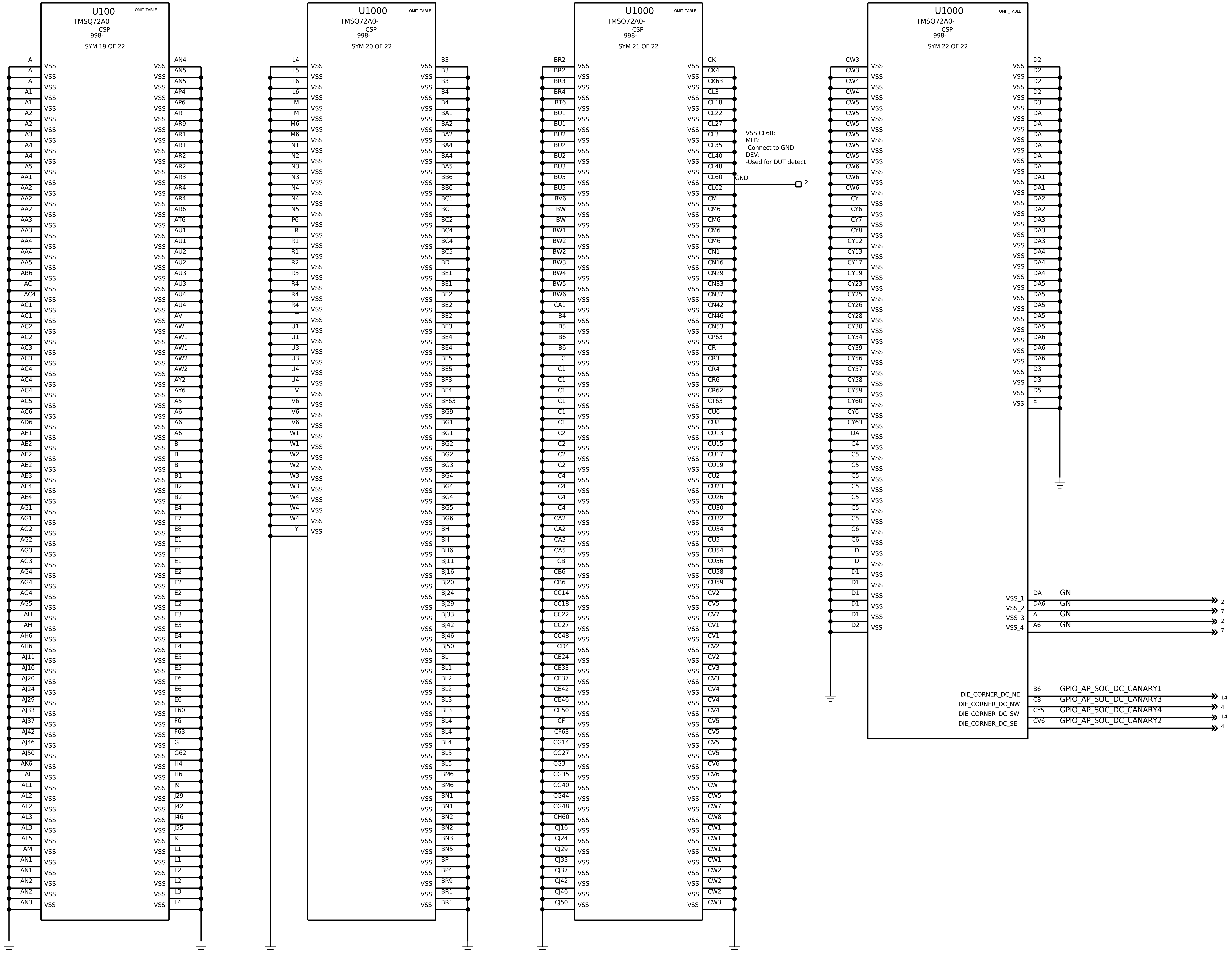
SOC:


U100
TMSQ72A0-
CSP
998-
SYM 19 OF 22
OMIT_TABLE
U1000
TMSQ72A0-
CSP
998-
SYM 20 OF 22
OMIT_TABLE
U1000
TMSQ72A0-
CSP
998-
SYM 21 OF 22
OMIT_TABLE
VSS CL60:
MLB:
-Connect to GND
DEV:
-Used for DUT detect
GND
2
U1000
TMSQ72A0-
CSP
998-
SYM 22 OF 22
OMIT_TABLE
VSS
VSS_1
VSS_2
VSS_3
VSS_4
DA
DA6
A
A6
GN
GN
GN
GN
2
7
2
7
DIE_CORNER_DC_NE
DIE_CORNER_DC_NW
DIE_CORNER_DC_SW
DIE_CORNER_DC_SE
B6
C8
CY5
CV6
GPIO_AP_SOC_DC_CANARY1
GPIO_AP_SOC_DC_CANARY3
GPIO_AP_SOC_DC_CANARY4
GPIO_AP_SOC_DC_CANARY2
14
4
14
4

PAGE TITLE

SOC: Power (GND)

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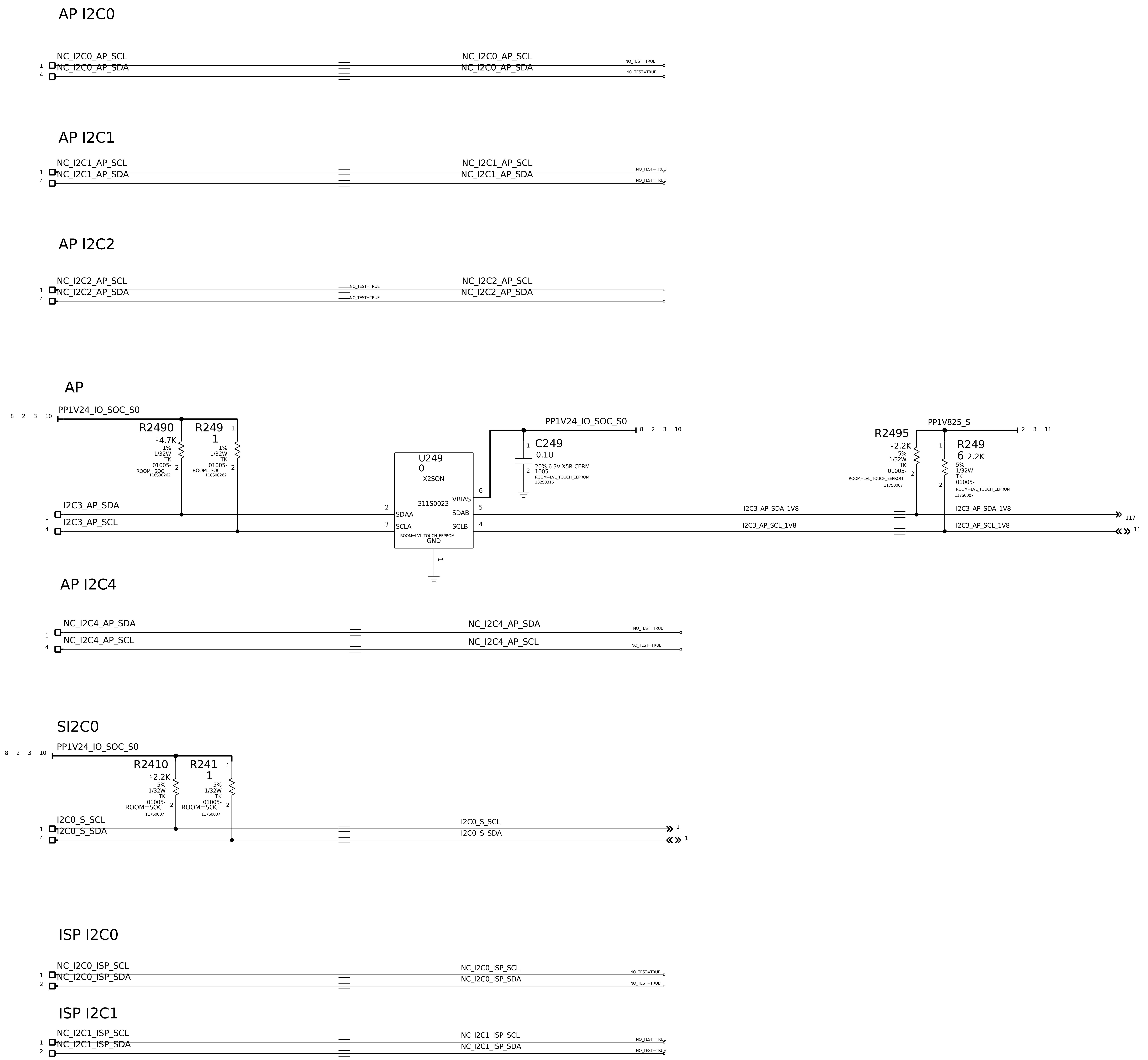
AP/ISP I2C


AP I2C0
NC_I2C0_AP_SCL
NC_I2C0_AP_SDA
NO_TEST=TRUE
AP I2C1
NC_I2C1_AP_SCL
NC_I2C1_AP_SDA
NO_TEST=TRUE
AP I2C2
NC_I2C2_AP_SCL
NC_I2C2_AP_SDA
NO_TEST=TRUE
AP
PP1V24_IO_SOC_S0
8 2 3 10
R2490
4.7K
1%
1/32W
TK
01005-
ROOM=SOC
118S00262
R2491
I2C3_AP_SDA
I2C3_AP_SCL
U2490
X2SON
311S0023
SDAA
SCLA
VBIAS
SDAB
SCLB
GND
ROOM=LVL_TOUCH_EEPROM
C249
0.1U
20% 6.3V X5R-CERM
1005
ROOM=LVL_TOUCH_EEPROM
132S0316
R2495
2.2K
5%
1/32W
TK
01005-
ROOM=LVL_TOUCH_EEPROM
117S0007
PP1V825_S
2 3 11
R2496
2.2K
I2C3_AP_SDA_1V8
I2C3_AP_SCL_1V8
117
11
AP I2C4
NC_I2C4_AP_SDA
NC_I2C4_AP_SCL
NO_TEST=TRUE
SI2C0
PP1V24_IO_SOC_S0
R2410
2.2K
5%
1/32W
TK
01005-
ROOM=SOC
117S0007
R2411
I2C0_S_SCL
I2C0_S_SDA
ISP I2C0
NC_I2C0_ISP_SCL
NC_I2C0_ISP_SDA
NO_TEST=TRUE
ISP I2C1
NC_I2C1_ISP_SCL
NC_I2C1_ISP_SDA
NO_TEST=TRUE

DOMAIN	AP	NUMBER	I2C	DIAGS NUMBER	3	SPEED	400kH

DEVICE	VOLTAGE	7-BIT ADDR	8-BIT ADDR	MAX SPEED	LOCATION
Touch EEPROM	1.8	0x5	0xA2,	400kH	Display

PAGE TITLE
SOC: Aliases: I2C AP/ISP

Apple

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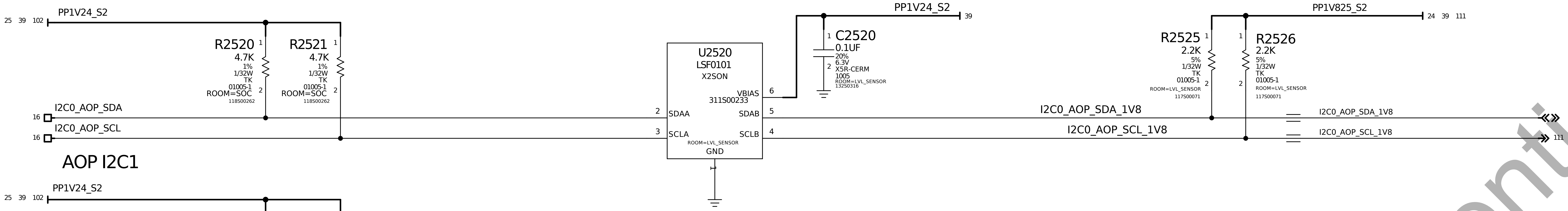
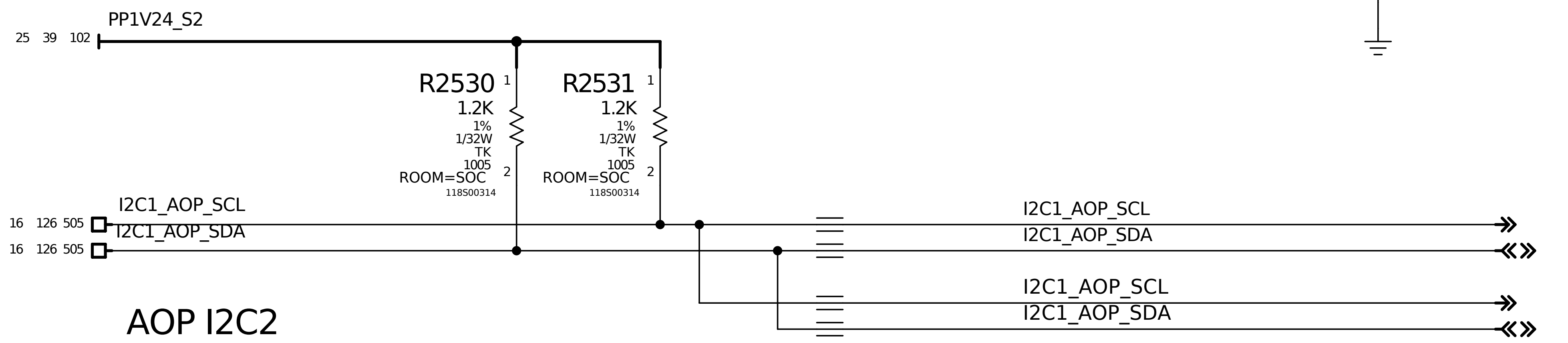
AOP/SMC/MTP I2C

AOP I2C0


PP1V24_S2
25 39 102
R2520
4.7K
1%
1/32W
TK
01005-1
ROOM=SOC
118S00262
R2521
4.7K
1%
1/32W
TK
01005-1
ROOM=SOC
118S00262
I2C0_AOP_SDA
I2C0_AOP_SCL
16
U2520
LSF0101
X2SON
VBIAS
311S00233
SDAA
SCLA
SDAB
SCLB
ROOM=LVL_SENSOR
GND
PP1V24_S2
39
C2520
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=LVL_SENSOR
132S0316
PP1V825_S2
24 39 111
R2525
2.2K
5%
1/32W
TK
01005-1
ROOM=LVL_SENSOR
117S00071
R2526
2.2K
5%
1/32W
TK
01005-1
ROOM=LVL_SENSOR
117S00071
I2C0_AOP_SDA_1V8
I2C0_AOP_SCL_1V8
111

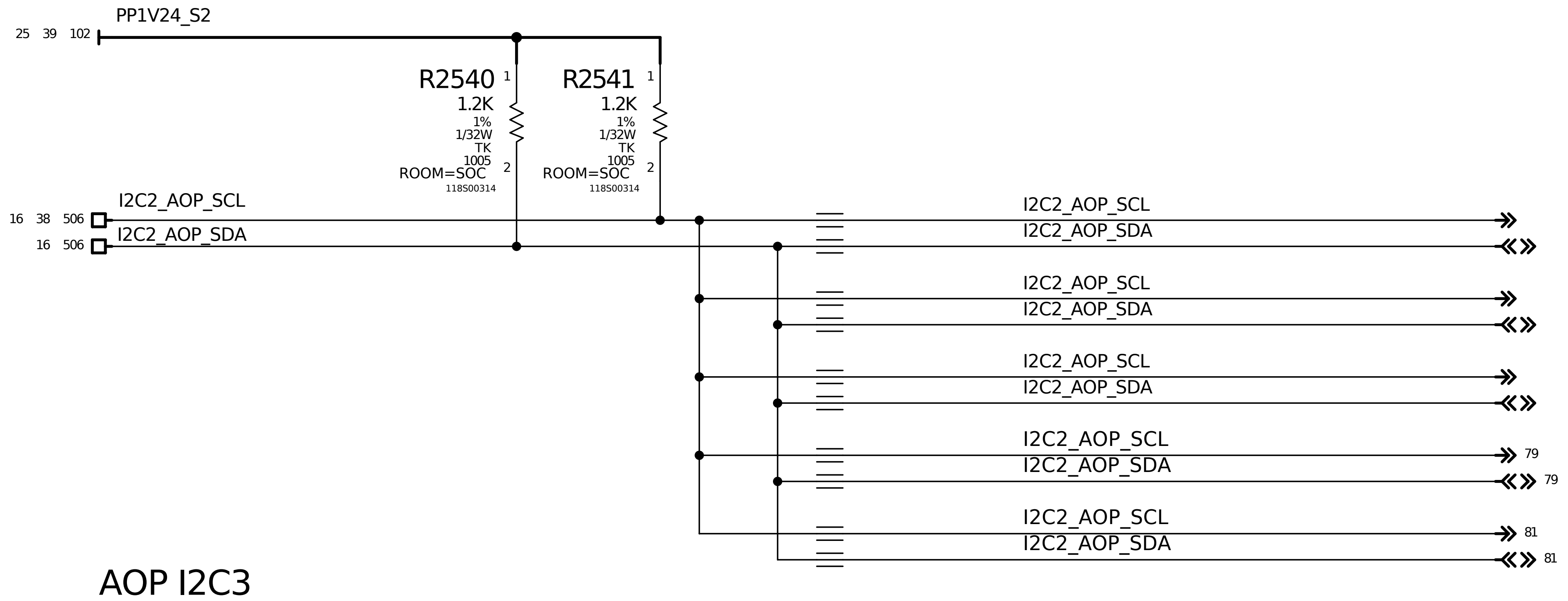
AOP I2C1


PP1V24_S2
25 39 102
R2530
1.2K
1%
1/32W
TK
1005
ROOM=SOC
118S00314
R2531
1.2K
1%
1/32W
TK
1005
ROOM=SOC
118S00314
I2C1_AOP_SCL
I2C1_AOP_SDA
16 126 505
I2C1_AOP_SCL
I2C1_AOP_SDA
I2C1_AOP_SCL
I2C1_AOP_SDA

DOMAIN	AOP	NUMBER	I2C1	DIAGS NUMBER	6	SPEED	400kHz

DEVICE	VOLTAGE	7-BIT ADDR	8-BIT ADDR	MAX SPEED	LOCATION
BARO	1.2V	0x76	0xEC, 0xED	1MHz	Dock
Arc EEPROM	1.2V	0x50	0xA0, 0xA1	400kHz	Arc Flex

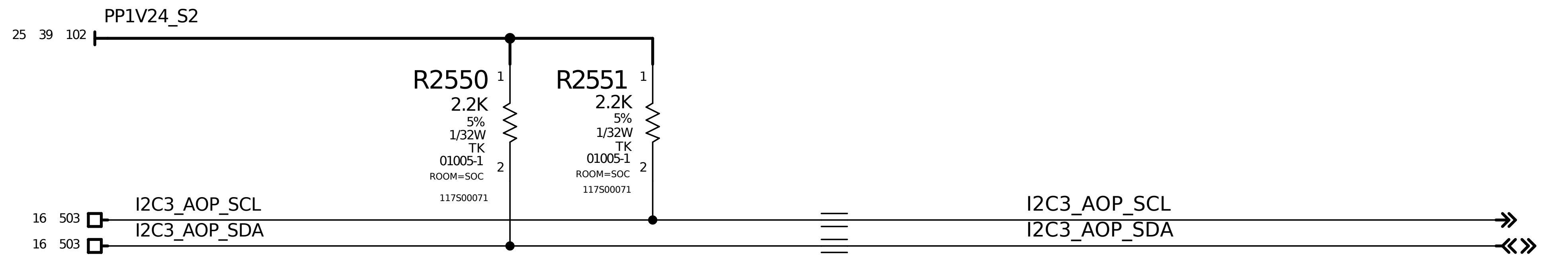
AOP I2C2


PP1V24_S2
25 39 102
R2540
1.2K
1%
1/32W
TK
1005
ROOM=SOC
118S00314
R2541
1.2K
1%
1/32W
TK
1005
ROOM=SOC
118S00314
I2C2_AOP_SCL
I2C2_AOP_SDA
16 38 506
16 506
I2C2_AOP_SCL
I2C2_AOP_SDA
I2C2_AOP_SCL
I2C2_AOP_SDA
I2C2_AOP_SCL
I2C2_AOP_SDA
I2C2_AOP_SCL
I2C2_AOP_SDA
79
I2C2_AOP_SCL
I2C2_AOP_SDA
81

DOMAIN	AOP	NUMBER	I2C2	DIAGS NUMBER	7	SPEED	1MHz

DEVICE	VOLTAGE	7-BIT ADDR	8-BIT ADDR	MAX SPEED	LOCATION
Sakonnet	1.2V	0x08	0x10, 0x11	1MHz	MLB
Codec	1.2V	0x4A	0x94, 0x95	1MHz	MLB
Arc Amp	1.2V	0x42	0x84, 0x85	1MHz	MLB
TOP Spk Amp	1.2V	0x41	0x82, 0x83	1MHz	MLB
BOT Spk Amp	1.2V	0x40	0x80, 0x81	1MHz	MLB

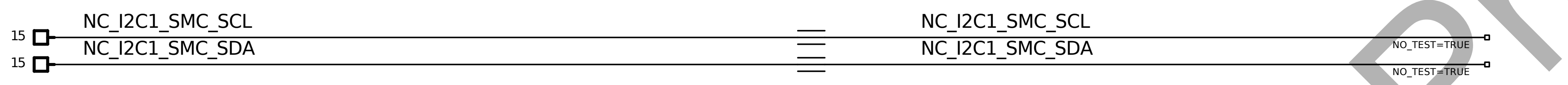
AOP I2C3


PP1V24_S2
25 39 102
R2550
2.2K
5%
1/32W
TK
01005-1
ROOM=SOC
117S00071
R2551
2.2K
5%
1/32W
TK
01005-1
ROOM=SOC
117S00071
I2C3_AOP_SCL
I2C3_AOP_SDA
16 503
I2C3_AOP_SCL
I2C3_AOP_SDA

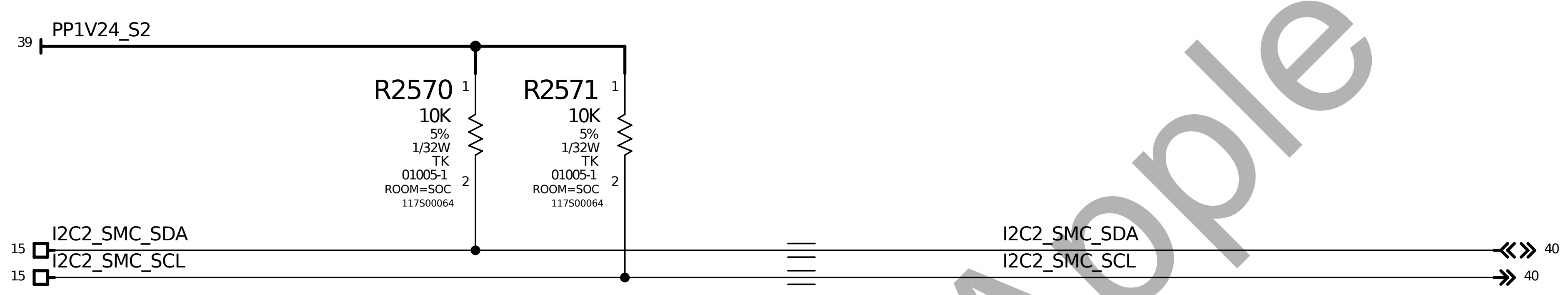
DOMAIN	AOP	NUMBER	I2C3	DIAGS NUMBER	12	SPEED	400KHz

DEVICE	VOLTAGE	7-BIT ADDR	8-BIT ADDR	MAX SPEED	LOCATION
Grimaldi	1.2V	0x3A	0x74,0x75	1MHz	BG Flex
BG ID EEPROM	1.2V	0x50	0xA0, 0xA1	400KHz	BG Flex

SMC I2C1 (Unused)


15
NC_I2C1_SMC_SCL
NC_I2C1_SMC_SDA
NC_I2C1_SMC_SCL
NC_I2C1_SMC_SDA
NO_TEST=TRUE
NO_TEST=TRUE

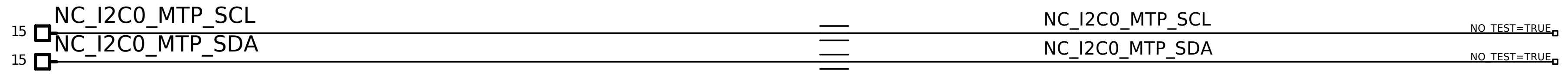
SMC I2C2


PP1V24_S2
39
R2570
10K
5%
1/32W
TK
01005-1
ROOM=SOC
117S00064
R2571
10K
5%
1/32W
TK
01005-1
ROOM=SOC
117S00064
I2C2_SMC_SDA
I2C2_SMC_SCL
15
I2C2_SMC_SDA
I2C2_SMC_SCL
40

DOMAIN	SMC	NUMBER	I2C2	DIAGS NUMBER	10	SPEED	400kHz

DEVICE	VOLTAGE	7-BIT ADDR	8-BIT ADDR	MAX SPEED	LOCATION
Rubicon	1.2V	0x71	0xE2, 0xE3	1MHz	MLB
Veridian	1.8V	0x0B	0x16, 0x17	400kHz	Battery Flex

MTP I2C0 (Unused)


15
NC_I2C0_MTP_SCL
NC_I2C0_MTP_SDA
NC_I2C0_MTP_SCL
NC_I2C0_MTP_SDA
NO_TEST=TRUE
NO_TEST=TRUE

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AOP GPIOs

AOP_UART2_RXD	16	NC_AOP_UART2_RXD	NC_AOP_UART2_RXD	NO_TEST=TRUE	
AOP_UART2_TXD	16	NC_AOP_UART2_TXD	NC_AOP_UART2_TXD	NO_TEST=TRUE	
AOP_FUNC0	16	GPIO_SCM_AOP_FROM_IMU_DATARDY	GPIO_SCM_AOP_FROM_IMU_DATARDY		73 129
AOP_FUNC1	16	GPIO_SCM_AOP_TO_IMU_SPI_CS_L	GPIO_SCM_AOP_TO_IMU_SPI_CS_L		73
AOP_FUNC2	16	GPIO_SCM_AOP_FROM_COMPASS_INT	GPIO_SCM_AOP_FROM_COMPASS_INT		102
AOP_FUNC3	16	GPIO_SCM_AOP_BI_PROX_INT_L	GPIO_SCM_AOP_BI_PROX_INT_L		102
AOP_FUNC4	16	GPIO_SCM_AOP_FROM_ALS_INT_L	GPIO_SCM_AOP_FROM_ALS_INT_L		111
AOP_FUNC5	16	GPIO_AOP_TO_CODEC_RESET_L	GPIO_AOP_TO_CODEC_RESET_L		79 128
AOP_FUNC6	16	NC_AOP_FUNC6	NC_AOP_FUNC6	NO_TEST=TRUE	
AOP_FUNC7	16	NC_AOP_FUNC7	NC_AOP_FUNC7	NO_TEST=TRUE	
AOP_FUNC8	16	NC_AOP_FUNC8	NC_AOP_FUNC8	NO_TEST=TRUE	
AOP_FUNC9	16	GPIO_SCM_AOP_TO_GNSS_SPI_CS_L	GPIO_SCM_AOP_TO_GNSS_SPI_CS_L		504
AOP_FUNC10	16	NC_AOP_FUNC10	NC_AOP_FUNC10	NO_TEST=TRUE	
AOP_FUNC11	16	NC_AOP_FUNC11	NC_AOP_FUNC11	NO_TEST=TRUE	
AOP_FUNC12	16	GPIO_AOP_FROM_GNSS_HOST_REQ	GPIO_AOP_FROM_GNSS_HOST_REQ		504
AOP_FUNC13	16	NC_AOP_FUNC13	NC_AOP_FUNC13	NO_TEST=TRUE	
AOP_FUNC14	16	GPIO_AOP_TO_BBMUX_SEL	GPIO_AOP_TO_BBMUX_SEL		103
AOP_FUNC15	16	GPIO_AOP_FROM_BARO_INT_L	GPIO_AOP_FROM_BARO_INT_L		505
AOP_I2S2_MCLK	16	GPIO_AOP_TO_SPKRAMP_TOP_RESET_L	GPIO_AOP_TO_SPKRAMP_TOP_RESET_L		81

NUB GPIOs

NUB_SCM_IO0	15	GPIO_NUB_FROM_BB_WDOG_L	GPIO_NUB_FROM_BB_WDOG_L		503
NUB_SCM_IO1	15	GPIO_NUB_TO_BB_FORCE_PWM	GPIO_NUB_TO_BB_FORCE_PWM		504
NUB_SCM_IO2	15	NC_NUB_GPIO2	NC_NUB_GPIO2	NO_TEST=TRUE	
NUB_SCM_IO3	15	NC_NUB_GPIO3	NC_NUB_GPIO3	NO_TEST=TRUE	
NUB_SCM_IO4	15	GPIO_NUB_TO_BB_DEBUG_EN	GPIO_NUB_TO_BB_DEBUG_EN		503
NUB_SCM_IO5	15	GPIO_BB_TO_NUB_GSM_TXBURST_IND	GPIO_BB_TO_NUB_GSM_TXBURST_IND		506
NUB_SCM_IO6	15	NC_NUB_GPIO6	NC_NUB_GPIO6	NO_TEST=TRUE	
NUB_SCM_IO7	15	NC_NUB_GPIO7	NC_NUB_GPIO7	NO_TEST=TRUE	
NUB_SCM_IO8	15	GPIO_NUB_FROM_BANFF_B2B_DETECT_L	GPIO_NUB_FROM_BANFF_B2B_DETECT_L		27 507
NUB_SCM_IO9	15	NC_NUB_GPIO9	NC_NUB_GPIO9	NO_TEST=TRUE	
NUB_SCM_IO10	15	NC_NUB_GPIO10	NC_NUB_GPIO10	NO_TEST=TRUE	
NUB_SCM_IO11	15	GPIO_NUB_FROM_DISPLAY_PANEL_ID	GPIO_NUB_FROM_DISPLAY_PANEL_ID		118
NUB_SCM_IO12	15	IO_BUTTON_RINGER_L	IO_BUTTON_RINGER_L		38 503
NUB_SCM_IO13	15	GPIO_NUB_TO_TOUCH_RESET_L	GPIO_NUB_TO_TOUCH_RESET_L		27 117
NUB_SCM_IO14	15	NC_NUB_GPIO14	NC_NUB_GPIO14	NO_TEST=TRUE	
NUB_SCM_IO15	15	NC_NUB_GPIO15	NC_NUB_GPIO15	NO_TEST=TRUE	

MTP GPIOs

MTP_FUNC0	15	GPIO_MTP_FROM_TOUCH_INT0_L	GPIO_MTP_FROM_TOUCH_INT0_L		117
MTP_FUNC1	15	IO_TOUCH_TO_MANY_SCAN_ACTIVE	IO_TOUCH_TO_MANY_SCAN_ACTIVE		39
MTP_FUNC2	15	NC_MTP_GPIO2	NC_MTP_GPIO2	NO_TEST=TRUE	
MTP_FUNC3	15	NC_MTP_GPIO3	NC_MTP_GPIO3	NO_TEST=TRUE	

AP GPIOs

AP_GPIO0	15	GPIO_BOARD_REV3	GPIO_BOARD_REV3		8
AP_GPIO1	15	GPIO_BOARD_REV2	GPIO_BOARD_REV2		8
AP_GPIO2	15	GPIO_BOARD_REV1	GPIO_BOARD_REV1		8
AP_GPIO3	15	GPIO_BOARD_REV0	GPIO_BOARD_REV0		8
AP_GPIO4	15	GPIO_AP_INTERPOSER_CANARY10_AP_TO_A	GPIO_AP_INTERPOSER_CANARY10_AP_TO_A		505
AP_GPIO5	15	GPIO_AP_INTERPOSER_CANARY9_AP_TO_A	GPIO_AP_INTERPOSER_CANARY9_AP_TO_A		504
AP_GPIO6	15	GPIO_AP_BI_ACE_SWDIO	GPIO_AP_BI_ACE_SWDIO		95 128
AP_GPIO7	15	GPIO_AP_TO_ACE_SWCLK	GPIO_AP_TO_ACE_SWCLK		95 128
AP_GPIO8	15	GPIO_AP_INTERPOSER_CANARY11_AP_TO_A	GPIO_AP_INTERPOSER_CANARY11_AP_TO_A		506
AP_GPIO9	15	GPIO_AP_FROM_BT_AUDIO_SYNC	GPIO_AP_FROM_BT_AUDIO_SYNC		503
AP_GPIO10	15	GPIO_AP_FROM_ACE_DFU_BOOTED_L	GPIO_AP_FROM_ACE_DFU_BOOTED_L		96
AP_GPIO11	15	NC_AP_GPIO11	NC_AP_GPIO11	NO_TEST=TRUE	
AP_GPIO12	15	GPIO_AP_SOC_DC_CANARY2	GPIO_AP_SOC_DC_CANARY2		129 144
AP_GPIO13	15	GPIO_AP_INTERPOSER_CANARY6_AP_TO_A	GPIO_AP_INTERPOSER_CANARY6_AP_TO_A		503
AP_GPIO14	15	GPIO_AP_INTERPOSER_CANARY7_AP_TO_A	GPIO_AP_INTERPOSER_CANARY7_AP_TO_A		503
AP_GPIO15	15	NC_AP_GPIO15	NC_AP_GPIO15	NO_TEST=TRUE	
AP_GPIO16	15	GPIO_AP_FROM_CODEC_INT_L	GPIO_AP_FROM_CODEC_INT_L		79 128
AP_GPIO17	15	GPIO_AP_TO_AMUX_PMU_SYNC	GPIO_AP_TO_AMUX_PMU_SYNC		38
AP_GPIO18	15	GPIO_AP_SOC_DC_CANARY1	GPIO_AP_SOC_DC_CANARY1		129 144
AP_GPIO19	15	NC_AP_GPIO19	NC_AP_GPIO19	NO_TEST=TRUE	
AP_GPIO20	15	GPIO_AP_SOC_DC_CANARY4	GPIO_AP_SOC_DC_CANARY4		129 144
AP_GPIO21	15	GPIO_AP_FROM_WLAN_TIME_SYNC	GPIO_AP_FROM_WLAN_TIME_SYNC		503
AP_GPIO22	15	GPIO_AP_INTERPOSER_CANARY8_AP_TO_A	GPIO_AP_INTERPOSER_CANARY8_AP_TO_A		504
AP_GPIO23	15	GPIO_AP_SOC_DC_CANARY3	GPIO_AP_SOC_DC_CANARY3		129 144
AP_GPIO24	15	GPIO_AP_INTERPOSER_CANARY5_AP_TO_A	GPIO_AP_INTERPOSER_CANARY5_AP_TO_A		507
AP_GPIO25	15	NC_AP_GPIO25	NC_AP_GPIO25	NO_TEST=TRUE	

SEP_GPIO0	14 39	IO_PMU_TO_SEP_DOUBLE_CLICK_DET	IO_PMU_TO_SEP_DOUBLE_CLICK_DET		36 39 128
SEP_GPIO1	14	NC_SOC_S_GPIO1	NC_SOC_S_GPIO1	NO_TEST=TRUE	
SEP_GPIO2	14	NC_SOC_S_GPIO2	NC_SOC_S_GPIO2	NO_TEST=TRUE	

PAGE TITLE
SOC: Aliases: GPIOs (26)

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Misc. SoC Aliases

DISPLAY
NC_SOC_DWI_CLK
NC_SOC_DWI_DATA
NC_SOC_DISP_I2C_SCL
NC_SOC_DISP_I2C_SDA
NC_SOC_DISP_POL
NC_SOC_DISP_EXT_HPD
NC_SOC_DISP_TOUCH_EB
NO_TEST=TRUE
ATCPHY
90_ATC0_EUSB_PARROT_BI_AP_P
90_ATC0_EUSB_PARROT_BI_AP_N
ISP
NC_ISP_GPIO_1
NC_ISP_GPIO_2
NC_ISP_GPIO_3
AP SPI
SPI0_AP_FROM_NAND_MISO_BOOT_CONFIG2
SPI0_AP_TO_NAND_MOSI_BOOT_CONFIG1
SPI0_AP_TO_NAND_SCLK_BOOT_CONFIG0
NC_SPI1_MISO_AP
NC_SPI1_MOSI_AP
NC_SPI1_SCLK_AP
NC_SPI1_CS_L_AP
NC_SPI2_MISO_AP
NC_SPI2_MOSI_AP
NC_SPI2_SCLK_AP
NC_SPI2_CS_L_AP
SPI3_AP_FROM_CODEC_MISO
SPI3_AP_TO_CODEC_MOSI
SPI3_AP_TO_CODEC_SCLK
SPI3_AP_TO_CODEC_CS_L
NUB
NC_SOC_SWD_TMS7
PP1V24_S2
R2701
47K
1%
1/32W
TK
1005
ROOM=B2B_SMP
118S00347
GPIO_NUB_FROM_BANFF_B2B_DETECT_L
MTP
GPIO_NUB_TO_TOUCH_RESET_L
NC_DEV_AP_MIC_DISABLE_L
NC_DEV_AP_MIC_DISABLE_WARN_L
NC_AP_TMR32_PWM0
NC_AP_TMR32_PWM1
NC_AP_TMR32_PWM2
NC_DEV_AP_MTR_TD_B
NC_DEV_AP_MTR_TD_BS
NC_DEV_AP_MTR_TD_E
NC_DEV_AP_MTR_TD_ES
NC_DEV_SOC_VDDA_TD
IO_PMU_TO_SYSTEM_RESET_L
NC_SOC_THROTTLE_TRIGGER0
IO_AP_FROM_PMU_UVWARN1_L
IO_AP_FROM_PMU_UVWARN0_L
IO_AP_FROM_PMU_PRE_SHDN_L
NC_SOC_THROTTLE_TRIGGER4
IO_SOC_TO_PMU_SOCHOT_RESET_L
GND
IO_AON_TO_AP_XTAL_CFSB
90_EUSB_DBG_PARROT_BI_AP_N
90_EUSB_DBG_PARROT_BI_AP_P
NC_TP_SOC_KIS_REQUEST_DFU
NC_TP_SOC_KIS_RESET
VSS CORNER BALLS
Serial UART
UART0_AP_TO_ACE_DEBUG_TXD
UART0_AP_FROM_ACE_DEBUG_RXD
NC_UART1_AP_CTS_L
NC_UART1_AP_RTS_L
GPIO_ACE_DEBUG_GPIO0_TO_UART1_AP_RXD
NC_UART1_AP_TXD
NC_UART2_AP_CTS_L
NC_UART2_AP_RTS_L
NC_UART2_AP_RXD
NC_UART2_AP_TXD
NC_UART3_AP_CTS_L
NC_UART3_AP_RTS_L
NC_UART3_AP_RXD
NC_UART3_AP_TXD
NC_UART4_AP_TXD
NC_UART4_AP_RXD
AOP SPI1
SPI1_AOP_TO_GNSS_SCLK
SPI1_AOP_TO_GNSS_SCLK_R
SPI1_AOP_FROM_GNSS_MISO
SPI1_AOP_TO_GNSS_MOSI
Serial I2S
NC_I2S4_AOP_DIN
NC_I2S4_AOP_DOUT
NC_I2S4_AOP_BCLK
NC_I2S4_AOP_LRCK
NC_I2S5_AOP_DIN
NC_I2S5_AOP_DOUT
NC_I2S5_AOP_BCLK
NC_I2S5_AOP_LRCK
NC_ANALOG_PCPU_ABSMIN
AOP
NC_DEV_JTAG_TDI
NC_DEV_JTAG_TDO
NC_DEV_JTAG_TRST_L
NC_DEV_SOC_NUB_CLK_OUT0
SOC_NUB_CLK_OUT1

PAGE TITLE
SOC: Aliases: Misc (27)

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PCIe ST0
C2800 0.22UF CER-X5R 10% 6.3V 1005
C2801 0.22UF CER-X5R 10% 6.3V 1005
C2802 0.22UF CER-X5R 10% 6.3V 1005
C2803 0.22UF CER-X5R 10% 6.3V 1005
90_PCIE_ST0_AP_FROM_NAND_C_RX_P
90_PCIE_ST0_AP_FROM_NAND_C_RX_N
90_PCIE_ST0_AP_FROM_NAND_RX_P
90_PCIE_ST0_AP_FROM_NAND_RX_N
90_PCIE_ST0_AP_TO_NAND_C_TX_P
90_PCIE_ST0_AP_TO_NAND_C_TX_N
90_PCIE_ST0_AP_TO_NAND_TX_P
90_PCIE_ST0_AP_TO_NAND_TX_N
C2806 0.1UF X5R-CERM 20% 6.3V 1005
C2807 0.1UF X5R-CERM 20% 6.3V 1005
C2808 0.1UF X5R-CERM 20% 6.3V 1005
C2809 0.1UF X5R-CERM 20% 6.3V 1005
C2804 0.22UF CER-X5R 10% 6.3V 1005
C2805 0.22UF CER-X5R 10% 6.3V 1005
C2810 0.22UF CER-X5R 10% 6.3V 1005
C2811 0.22UF CER-X5R 10% 6.3V 1005
90_PCIE_GP0_AP_TO_WLAN_C_TX_P
90_PCIE_GP0_AP_TO_WLAN_C_TX_N
90_PCIE_GP0_AP_TO_WLAN_TX_P
90_PCIE_GP0_AP_TO_WLAN_TX_N
90_PCIE_GP0_AP_FROM_WLAN_C_RX_P
90_PCIE_GP0_AP_FROM_WLAN_C_RX_N
90_PCIE_GP0_AP_FROM_WLAN_RX_P
90_PCIE_GP0_AP_FROM_WLAN_RX_N
90_PCIE_GP1_AP_TO_BB_C_TX_P
90_PCIE_GP1_AP_TO_BB_C_TX_N
90_PCIE_GP1_AP_TO_BB_TX_P
90_PCIE_GP1_AP_TO_BB_TX_N
90_PCIE_GP1_AP_FROM_BB_C_RX_P
90_PCIE_GP1_AP_FROM_BB_C_RX_N
90_PCIE_GP1_AP_FROM_BB_RX_P
90_PCIE_GP1_AP_FROM_BB_RX_N
DISP
IO_AOP_TOUCH_FROM_DISPLAY_TE
NC_SOC_DISP_TOUCH_BSYNC0
NC_SOC_DISP_TOUCH_BSYNC1
NC_MIPI_PWR_DWN
IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L
NC_SOC_DSG_BSYNC0
IO_AOP_ALS_TOUCH_FROM_DISPLAY_BSYNC1
NC_SOC_DSG_BSYNC2
NC_SOC_DSG_EB
NC_SOC_PROXBOLED
NO_TEST=TRUE
LPDP
DISP: LPDP Lanes
NC_85_LPDP_EXT_AP_TO_DISP_TX_D0_P
NC_85_LPDP_EXT_AP_TO_DISP_TX_D0_N
NC_85_LPDP_EXT_AP_TO_DISP_TX_D1_P
NC_85_LPDP_EXT_AP_TO_DISP_TX_D1_N
NC_85_LPDP_EXT_AP_TO_DISP_TX_D2_P
NC_85_LPDP_EXT_AP_TO_DISP_TX_D2_N
NC_85_LPDP_EXT_AP_TX_D3_P
NC_85_LPDP_EXT_AP_TX_D3_N
NC_85_LPDP_EXT_AP_TO_DISP_AUX_P
NC_85_LPDP_EXT_AP_TO_DISP_AUX_N
ISP: LPDP Lanes
90_LPDP_ISP_FROM_FCAM_RX_D0_P
90_LPDP_ISP_FROM_FCAM_RX_D0_N
90_LPDP_ISP_FROM_FCAM_RX_D1_P
90_LPDP_ISP_FROM_FCAM_RX_D1_N
NC_90_LPDP_ISP_RX_D2_P
NC_90_LPDP_ISP_RX_D2_N
NC_90_LPDP_ISP_RX_D3_P
NC_90_LPDP_ISP_RX_D3_N
NC_90_LPDP_ISP_RX_D4_P
NC_90_LPDP_ISP_RX_D4_N
90_LPDP_ISP_FROM_WIDE_RX_D0_P
90_LPDP_ISP_FROM_WIDE_RX_D0_N
90_LPDP_ISP_FROM_WIDE_RX_D1_P
90_LPDP_ISP_FROM_WIDE_RX_D1_N
90_LPDP_ISP_FROM_WIDE_RX_D2_P
90_LPDP_ISP_FROM_WIDE_RX_D2_N
MISC
90_MIPI_AP_TO_DISPLAY_CLK_P
90_MIPI_AP_TO_DISPLAY_CLK_N
90_MIPI_AP_TO_DISPLAY_D0_P
90_MIPI_AP_TO_DISPLAY_D0_N
90_MIPI_AP_TO_DISPLAY_D1_P
90_MIPI_AP_TO_DISPLAY_D1_N
90_MIPI_AP_TO_DISPLAY_D2_P
90_MIPI_AP_TO_DISPLAY_D2_N
NC_90_MIPI_AP_TO_DISPLAY_D3_P
NC_90_MIPI_AP_TO_DISPLAY_D3_N
90_MIPI_ISP_FROM_IRCAM_CLK_P
90_MIPI_ISP_FROM_IRCAM_CLK_N
90_MIPI_ISP_FROM_IRCAM_D0_P
90_MIPI_ISP_FROM_IRCAM_D0_N
90_MIPI_ISP_FROM_IRCAM_D1_P
90_MIPI_ISP_FROM_IRCAM_D1_N
PP1V24_S1
PP0V805_SOC_FIXED_S1
SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK_R
SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA
SPMI1_COEX_AOP_TO_BB_WLAN_CLK_R
SPMI1_COEX_AOP_TO_BB_WLAN_CLK
SPMI1_COEX_AOP_BI_BB_WLAN_DATA
NC_ANALOG_LPDP_AP_TX_RCAL_POS
NC_ANALOG_LPDP_AP_TX_RCAL_NEG
ISP: LPDP Aux
NC_LPDP_ISP_AUX_RX_D0P
NC_LPDP_ISP_AUX_RX_D1P
NC_LPDP_ISP_AUX_RX_D2P
NC_LPDP_ISP_AUX_RX_D3P
NC_LPDP_ISP_AUX_RX_D4P
NC_LPDP_ISP_AUX_RX_D5P
NC_LPDP_ISP_AUX_RX_D6P
NC_LPDP_ISP_AUX_RX_D7P
PCIe GPx
PCIE GP0
90_PCIE_GP0_AP_TO_WLAN_REFCLK_P
90_PCIE_GP0_AP_TO_WLAN_REFCLK_N
90_PCIE_GP0_AP_FROM_WLAN_C_RX_P
90_PCIE_GP0_AP_FROM_WLAN_C_RX_N
90_PCIE_GP0_AP_TO_WLAN_C_TX_P
90_PCIE_GP0_AP_TO_WLAN_C_TX_N
PP1V24_IO_SOC_S0
R2830 47K 5% 1/32W TK 01005-1
PCIE_GP0_AP_BI_WLAN_CLKREQ_L
PCIE_GP0_AP_TO_WLAN_PERST_L
R2831 100K 5% 1/32W TK 1005
PCIE GP1
90_PCIE_GP1_AP_TO_BB_REFCLK_P
90_PCIE_GP1_AP_TO_BB_REFCLK_N
90_PCIE_GP1_AP_FROM_BB_C_RX_P
90_PCIE_GP1_AP_FROM_BB_C_RX_N
90_PCIE_GP1_AP_TO_BB_C_TX_P
90_PCIE_GP1_AP_TO_BB_C_TX_N
BB CLKREQ PULL-UP and PULL_DOWN LIVES IN RADIO HIERARCHY
PCIE_GP1_AP_BI_BB_CLKREQ_L
PCIE_GP1_AP_TO_BB_PERST_L
D C B A

PAGE TITLE
SOC: Aliases: FF-Specific (28)

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OMIT_TABLE
I_VCC = 1150mA MAX (1us PEAK POWER)
PP2V625_NAND_S0
C3013 13UF
C3019 13UF
C3049 2.2UF
C3051 2.2UF
C3052 2.2UF
C3037 220PF
C3038 47PF
C3054 330PF
C3039 22PF
I_VDDIO1 (@ 1.2V) = 72mA MAX S5E
I_VDDIO1 (@ 1.2V) = 95mA MAX S6E BCM
Enabling S6E BCM mode needs 23mA more peak current for VCCQ_IO (PP1V24_S0)
PP1V24_IO_SOC_S0
C3041 2.2UF
C3024 2.2UF
C3026 2.2UF
C3010 0.1UF
C3055 220PF
FL3025 10-OHM-1.1A
PP_NAND_VDDIO1_F
C3057 47PF
C3058 22PF
C3025 2.2UF
R3063 2
PP_NAND_VDDIO1_R
C3063 2.2UF
I_VDDIO2 (@ 1.2V) = 384mA MAX
Components with Cross won't exist on this MLB.
PP1V24_IO_SOC_S0
C3031 20UF
C3029 20UF
C3006 16UF
C3033 16UF
C3034 16UF
C3043 2.2UF
C3060 330PF
C3012 220PF
C3015 47PF
C3017 22PF
I_VDD = 820mA MAX
PP0V83_NAND_S0
C3002 16UF
C3005 16UF
C3040 2.2UF
C3042 2.2UF
C3044 2.2UF
C3046 2.2UF
C3022 2.2UF
C3074 0.22UF
C3075 0.22UF
C3076 0.22UF
C3077 0.22UF
C3070 0.1UF
C3071 0.1UF
C3072 0.1UF
C3073 0.1UF
C3007 330PF
C3003 220PF
C3008 47PF
C3004 22PF
FL3023 10-OHM-1.1A
PP0V83_NAND_PLL
VOLTAGE=0.83 V
C3023 2.2UF
C3009 0.1UF
NC_DEV_NAND_VPP
GND
VQPS used for fuse programming, GND in system
U3000 HN3T2DT8CAX384 BGA SYM 1 OF 4
VCC
VDDIO_1
PCIE_AVDD_H
AVDD1X_PLL
VDDIO_2_L_ANI
VDDIO_2_DP
VDD
PCIE_VDD
VDD_PLL
VPP
VQPS
(VCC)
(VCCQ_IO)
(VCCQ_ANI)
(VDD)
(VSS)
VSS
U3000 HN3T2DT8CAX384 BGA SYM 4 OF 4
VSS/DUMMY
U3000 HN3T2DT8CAX384 BGA SYM 3 OF 4
RFU_2
RFU
NC

MICRO NAND: PWR (30)

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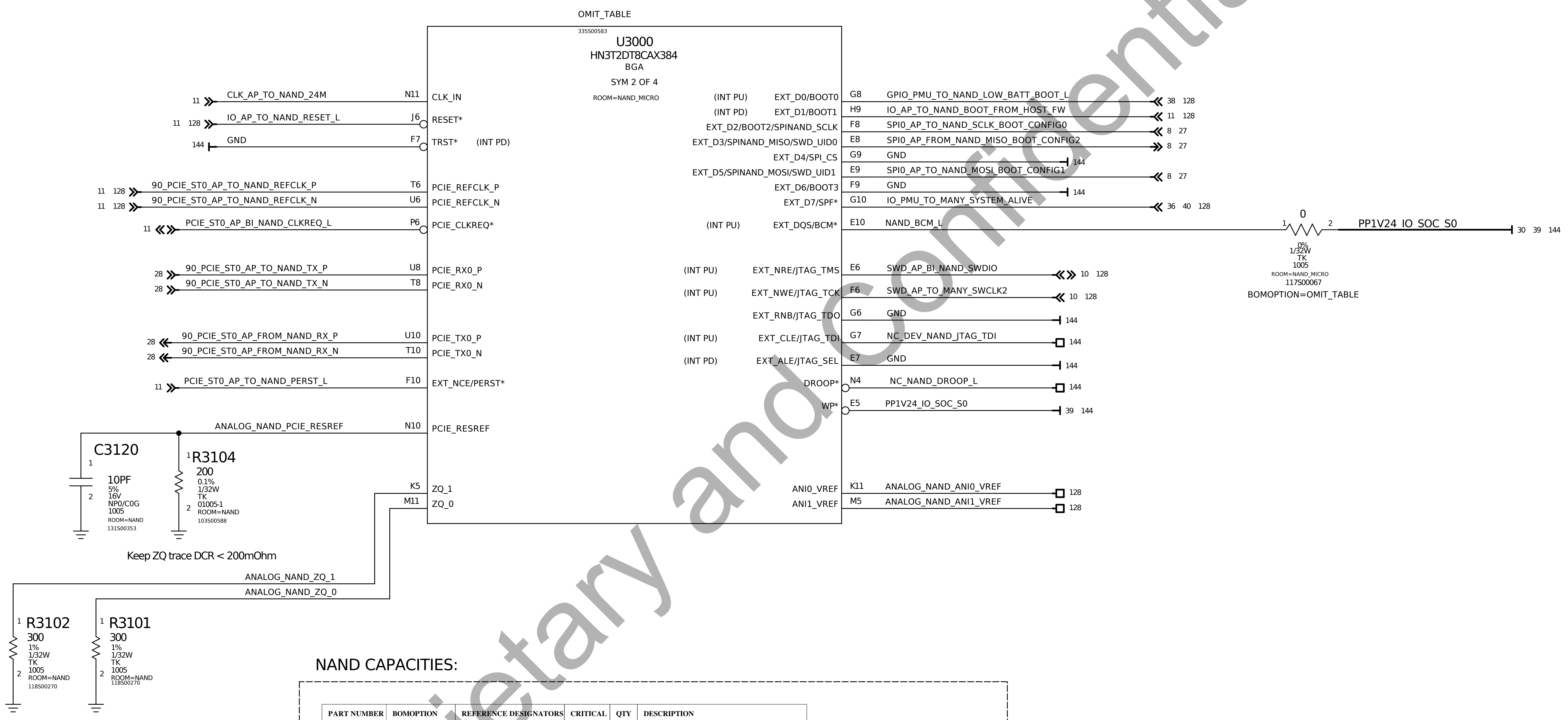
S5E/S6E NAND

NOTES:

INT PU = internal pull up to VDDIO_1
INT PD = internal pull down to VSS
Internal pulls are 40kOhm (min), 80kOhm (typ), 165kOhm (max)



OMIT_TABLE
335S00583
U3000
HN3T2DT8CAX384
BGA
SYM 2 OF 4
ROOM=NAND_MICRO
11 CLK_AP_TO_NAND_24M N11 CLK_IN
11 128 IO_AP_TO_NAND_RESET_L J6 RESET*
144 GND F7 TRST* (INT PD)
11 128 90_PCIE_ST0_AP_TO_NAND_REFCLK_P T6 PCIE_REFCLK_P
11 128 90_PCIE_ST0_AP_TO_NAND_REFCLK_N U6 PCIE_REFCLK_N
11 PCIE_ST0_AP_BI_NAND_CLKREQ_L P6 PCIE_CLKREQ*
28 90_PCIE_ST0_AP_TO_NAND_TX_P U8 PCIE_RX0_P
28 90_PCIE_ST0_AP_TO_NAND_TX_N T8 PCIE_RX0_N
28 90_PCIE_ST0_AP_FROM_NAND_RX_P U10 PCIE_TX0_P
28 90_PCIE_ST0_AP_FROM_NAND_RX_N T10 PCIE_TX0_N
11 PCIE_ST0_AP_TO_NAND_PERST_L F10 EXT_NCE/PERST*
ANALOG_NAND_PCIE_RESREF N10 PCIE_RESREF
C3120 1 2 10PF 5% 16V NP0/C0G 1005 ROOM=NAND 131S00353
R3104 1 2 200 0.1% 1/32W TK 01005-1 ROOM=NAND 103S00588
K5 ZQ_1
M11 ZQ_0
Keep ZQ trace DCR < 200mOhm
ANALOG_NAND_ZQ_1
ANALOG_NAND_ZQ_0
R3102 1 2 300 1% 1/32W TK 1005 ROOM=NAND 118S00270
R3101 1 2 300 1% 1/32W TK 1005 ROOM=NAND 118S00270
(INT PU) EXT_D0/BOOT0 G8 GPIO_PMU_TO_NAND_LOW_BATT_BOOT_L 38 128
(INT PD) EXT_D1/BOOT1 H9 IO_AP_TO_NAND_BOOT_FROM_HOST_FW 11 128
EXT_D2/BOOT2/SPINAND_SCLK F8 SPI0_AP_TO_NAND_SCLK_BOOT_CONFIG0 8 27
EXT_D3/SPINAND_MISO/SWD_UID0 E8 SPI0_AP_FROM_NAND_MISO_BOOT_CONFIG2 8 27
EXT_D4/SPI_CS G9 GND 144
EXT_D5/SPINAND_MOSI/SWD_UID1 E9 SPI0_AP_TO_NAND_MOSI_BOOT_CONFIG1 8 27
EXT_D6/BOOT3 F9 GND 144
EXT_D7/SPF* G10 IO_PMU_TO_MANY_SYSTEM_ALIVE 36 40 128
(INT PU) EXT_DQS/BCM* E10 NAND_BCM_L
0 1 2 0% 1/32W TK 1005 ROOM=NAND_MICRO 117S00067
BOMOPTION=OMIT_TABLE
PP1V24_IO_SOC_S0 30 39 144
(INT PU) EXT_NRE/JTAG_TMS E6 SWD_AP_BI_NAND_SWDIO 10 128
(INT PU) EXT_NWE/JTAG_TCK F6 SWD_AP_TO_MANY_SWCLK2 10 128
EXT_RNB/JTAG_TDO G6 GND 144
(INT PU) EXT_CLE/JTAG_TDI G7 NC_DEV_NAND_JTAG_TDI 144
(INT PD) EXT_ALE/JTAG_SEL E7 GND 144
DROOP* N4 NC_NAND_DROOP_L 144
WP* E5 PP1V24_IO_SOC_S0 39 144
ANI0_VREF K11 ANALOG_NAND_ANI0_VREF 128
ANI1_VREF M5 ANALOG_NAND_ANI1_VREF 128

Max allowed onboard trace resistance
for ANALOG_NAND_PCIE_RESREF shall be 1150mohm

NAND CAPACITIES:

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
335S00579	NAND:SUPREME	U3000	C	1	NAND,3DV7T,128GB,S5E,17.0,512G,H,ULGA315
335S00581	NAND:EXTREME	U3000	C	1	NAND,3DV7T,256GB,S5E,17.0,512G,H,ULGA315
335S00583	NAND:MAX	U3000	C	1	NAND,3DV7T,512GB,S5E,17.0,512G,H,ULGA315

ALTERNATE PART NO.	PRIMARY PART NO.	BOMOPTION	REFERENCE DESIGNATORS	COMMENT
335S00551	335S00579	NAND:SUPREME	U3000	KIOXIA,BiCS5,128GB,SUPREME
335S00635	335S00581	NAND:EXTREME	U3000	SMSG,BiCS8,256GB,EXTREME
335S00665	335S00581	NAND:EXTREME	U3000	KIOXIA,BiCS8,256GB,EXTREME
335S00553	335S00583	NAND:MAX	U3000	KIOXIA,BiCS5,512GB,MAX

S6E NAND:

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
335S00673	NAND:S6EEXTREME	U3000	C	1	NAND,BC8T,512GB,S6E,XXX,1T,K,ULGA315
117S00067	NAND:S6EEXTREME	R3100	C	1	RES,TK,0 OHM,1/32W,01005

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OUTPUTS

OUTPUTS

U3300
BAKU-STUDY
WLCSP
SYM 1 OF 6
ROOM=PMU
998-25286
OMIT_TABLE
BUCK4
2.9A MAX
PP1V1_VDD2H_DDR_S2
VOLTAGE=1.1 V
(DEFAULT, DVC = 0.98V - 1.05V)
C3345 4UF
C3344 16UF
C3343 16UF
C3342 16UF
C3341 16UF
C3340 220PF
L3340
0.47UH-20%-4.0A-0.05OHM
PIJD2012-SM
152S00985
LX_BUCK4
XW3340
SHORT-20L-0.05MM-SM
ANALOG_FB_BUCK4
BUCK4_LX
BUCK4_FB
BUCK4_VSS_FB
BUCK5
2.5A MAX
PP_AVE_S0
(0.605V - 0.762V)
BUCK5 enabled/ disabled as needed in S0 state
C3351 16UF
C3350 16UF
C3352 220PF
L3350
0.47UH-20%-4.0A-0.05OHM
LX_BUCK5
XW3350
ANALOG_FB_BUCK5
MID-PLANE FEEDBACK
BUCK5_LX
BUCK5_FB
BUCK5_VSS_FB
BUCK6
3A MAX
PP1V24_S4
VOLTAGE=1.24 V
(DEFAULT)
C3365 16UF
C3364 16UF
C3363 16UF
C3362 16UF
C3361 4UF
C3360 220PF
L3360
0.47UH-20%-4.0A-0.05OHM
LX_BUCK6
XW3360
ANALOG_FB_BUCK6
LOCAL FEEDBACK
BUCK6_LX
BUCK6_FB
BUCK6_VSS_FB
BUCK7
3A MAX
PP_SRAM_S2
C3373 16UF
C3372 16UF
C3371 16UF
C3370 220PF
L3370
0.47UH-20%-4.0A-0.05OHM
LX_BUCK7
XW3370
ANALOG_FB_BUCK7
MID-PLANE FEEDBACK
BUCK7_LX
BUCK7_FB
BUCK7_VSS_FB
BUCK8
3.0A MAX
PP_DISP_S1
(0.625V - 0.682V)
C3383 16UF
C3380 220PF
L3380
0.47UH-20%-4.0A-0.05OHM
LX_BUCK8
XW3380
ANALOG_FB_BUCK8
SOC FEEDBACK
BUCK8_LX
BUCK8_FB
BUCK8_VSS_FB
BUCK9
0.25A MAX
VOLTAGE=1.0 V
PP1VX_DISPLAY_S0
I_LOAD = 0.2A (MAX)
C3392 16UF
C3391 16UF
C3393 10UF
C3390 220PF
L3390
1.0UH-20%-1.55A-0.063OHM
152S00987
LX_BUCK9
XW3390
ANALOG_FB_BUCK9
LOCAL FEEDBACK
PLACE_NEAR=C3391.1:2MM
BUCK9_LX
BUCK9_FB
BUCK9_VSS_FB
BUCK0
13.8A MAX
PP_CPU_PCORE_S0
(0.524V - 1.06V)
L3300
1UH-20%-3.0A-0.06OHM
PIJR2016-SM
152S00823
L3301
0.1UH-20%-6.1A-0.019OHM
MTFE2016-2SM
152S00897
L3302
0.1UH-20%-6.1A-0.019OHM
MTFE2016-2SM
UPPER_COIL_IN
LOWER_COIL_IN
UPPER_COIL_OUT
LOWER_COIL_OUT
LX_BUCK0_P0
LX_BUCK0_P2
LX_BUCK0_P3
LX_BUCK0_P4
LX_BUCK0_P5
BUCK0_LX_PH0
BUCK0_LX_PH2
BUCK0_LX_PH3
BUCK0_LX_PH4
BUCK0_LX_PH5
BUCK0_FB
BUCK0_VSS_FB
XW3301
ANALOG_FB_BUCK0
SOC FEEDBACK
C3300 220PF
C3301 100PF
C3303 16UF
BUCK1
10.0A MAX
PP_GPU_S0
(0.57V - 0.9V)
BUCK1 enabled/ disabled as needed in S0 state
L3310
0.1UH-20%-6.1A-0.019OHM
MTFE2016-2SM
LX_BUCK1_P0
LX_BUCK1_P1
BUCK1_LX_PH0
BUCK1_LX_PH1
BUCK1_FB
BUCK1_VSS_FB
XW3310
ANALOG_FB_BUCK1
SOC FEEDBACK
XW3312
ANALOG_FB_BUCK1_VSS
SOC FEEDBACK
C3310 220PF
C3311 16UF
C3312 220PF
BUCK2
11A MAX
PP_SOC_S1P5
(0.614V - 0.833V)
L3320
1UH-20%-3.0A-0.06OHM
152S00823
L3321
0.22UH-20%-5.8A-0.04OHM
152S00818
L3322
0.22UH-20%-5.8A-0.04OHM
152S00818
LX_BUCK2_P0
LX_BUCK2_P2
LX_BUCK2_P3
BUCK2_LX_PH0
BUCK2_LX_PH2
BUCK2_LX_PH3
BUCK2_FB
BUCK2_VSS_FB
XW3320
ANALOG_FB_BUCK2
MID-PLANE FEEDBACK
C3320 220PF
C3321 16UF
BUCK3
2A MAX
PP1V825_S4
L3330
0.47UH-20%-4.0A-0.05OHM
152S00985
LX_BUCK3
BUCK3_LX
BUCK3_FB
BUCK3_VSS_FB
XW3330
ANALOG_FB_BUCK3
LOCAL FEEDBACK
C3330 220PF
C3331 10UF
C3332 16UF
C3334 16UF
C3335 16UF
C3336 16UF
PACK_OPTION=MLB
NO_XNET_CONNECTION
ROOM=PMU
DIDT=TRUE

BUCK9 NOTES:

1. PP1VX_DISPLAY_S2' is default OFF

2. For PP1VX_DISPLAY_S2, the nominal voltage is between 1.0V to 1.15V depending on program and display

PAGE TITLE

SYS PWR: PMU: Bucks (1/5) (33)

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INPUTS
OUTPUTS
OMIT_TABLE
U3300
BAKU-STUDY
WLCSP
SYM 2 OF 6
ROOM=PMU
998-25286
PP_VDD_MAIN
PLACE IN VICINITY OF PMU FOR BULK CAP
C3406 13UF
C3407 13UF
C3450 0.22UF
C3498 0.22UF
C3459 0.22UF
C3441 0.22UF
C3497 0.22UF
C3454 0.22UF
C3499 2.2UF
C3455 0.22UF
C3475 220PF
C3476 220PF
C3492 2.2UF
C3456 0.22UF
C3457 0.22UF
C3469 0.22UF
C3451 0.22UF
C3491 2.2UF
C3460 0.22UF
C3470 0.22UF
C3442 0.22UF
C3482 220PF
C3485 330PF
C3486 330PF
C3487 220PF
C3496 0.22UF
C3458 2.2UF
C3473 0.22UF
C3464 0.22UF
C3471 0.22UF
C3463 3.9UF
C3452 0.22UF
C3472 0.22UF
C3478 220PF
C3479 220PF
C3466 0.22UF
C3467 0.22UF
C3468 0.22UF
TOP SIDE BUCK INPUTS
RIGHT SIDE BUCK INPUTS
BOTTOM SIDE BUCK INPUT
BUCK10
BUCK11
BUCK12
BUCK13
L3400 1UH-20%-3.0A-0.06OHM
L3401 0.22UH-20%-5.8A-0.04OHM
XW3400
SOC FEEDBACK
PACK_OPTION=MLB
PP_CPU_SRAM_S0
(0.77V - 1.1V)
C3401 220PF
C3402 16UF
BUCK10 5.5A MAX
L3410 1UH-20%-3.0A-0.06OHM
L3411 0.22UH-20%-5.8A-0.04OHM
XW3410
PP_CPU_ECORE_S0
(0.524V - 0.93V)
C3411 16UF
C3412 16UF
C3410 220PF
BUCK11 5.5A MAX
L3420 0.47UH-20%-4.0A-0.05OHM
PP0V9_S1
VOLTAGE=0.9 V
XW3420
LOCAL FEEDBACK
C3420 220PF
C3424 16UF
C3423 16UF
C3422 16UF
C3421 16UF
BUCK12 2.8A MAX
L3430 0.47UH-20%-4.0A-0.05OHM
PP_DCS_S1
(0.605V - 1.02V)
XW3430
C3436 220PF
C3435 16UF
C3430 16UF
C3431 16UF
C3437 10UF
BUCK13 2.5A MAX
ANALOG_FB_BUCK10
ANALOG_FB_BUCK11
ANALOG_FB_BUCK12
ANALOG_FB_BUCK13

PAGE TITLE

SYS PWR: PMU: Bucks (2/5) (34)

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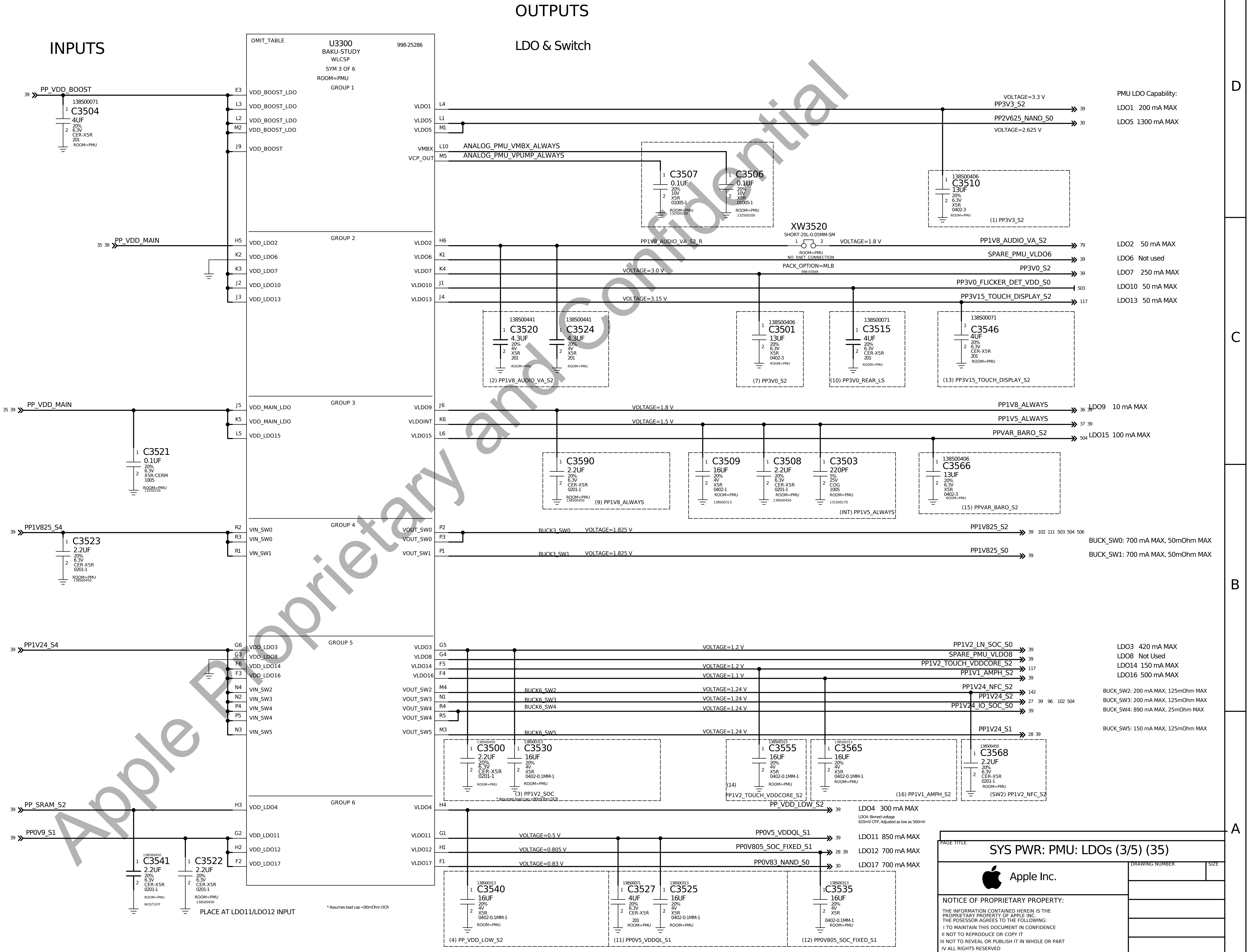
SUBSYSTEM SPECIFIC BOM TABLES

PMU - LDOs

PMU BOM TABLE

PART NUMBER	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
998-32560	U3300	C	1	IC,PMU,BAKU,A1,OTP-QPC,CSP380


OUTPUTS
INPUTS
LDO & Switch
OMIT_TABLE
U3300
BAKU-STUDY
WLCSP
SYM 3 OF 6
ROOM=PMU
998-25286
GROUP 1
GROUP 2
GROUP 3
GROUP 4
GROUP 5
GROUP 6
39 PP_VDD_BOOST
E3 VDD_BOOST_LDO
L3 VDD_BOOST_LDO
L2 VDD_BOOST_LDO
M2 VDD_BOOST_LDO
J9 VDD_BOOST
138S00071 C3504 4UF 20% 6.3V CER-X5R 201 ROOM=PMU
35 39 PP_VDD_MAIN
H5 VDD_LDO2
K2 VDD_LDO6
K3 VDD_LDO7
J2 VDD_LDO10
J3 VDD_LDO13
J5 VDD_MAIN_LDO
K5 VDD_MAIN_LDO
L5 VDD_LDO15
C3521 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=PMU 132S0316
39 PP1V825_S4
R2 VIN_SW0
R3 VIN_SW0
R1 VIN_SW1
C3523 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=PMU 138S00450
39 PP1V24_S4
G6 VDD_LDO3
G3 VDD_LDO8
F6 VDD_LDO14
F3 VDD_LDO16
N4 VIN_SW2
N2 VIN_SW3
P4 VIN_SW4
P5 VIN_SW4
N3 VIN_SW5
39 PP_SRAM_S2
H3 VDD_LDO4
39 PP0V9_S1
G2 VDD_LDO11
H2 VDD_LDO12
F2 VDD_LDO17
138S00450 C3541 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=PMU NOSTUFF
C3522 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=PMU 138S00450
PLACE AT LDO11/LDO12 INPUT
* Assumes load cap <80mOhm DCR
VLDO1 L4
VLDO5 L1
VLDO5 M1
VMBX L10 ANALOG_PMU_VMBX_ALWAYS
VCP_OUT M5 ANALOG_PMU_VPUMP_ALWAYS
C3507 0.1UF 20% 10V X5R 01005-1 ROOM=PMU 132S00200
C3506 0.1UF 20% 10V X5R 01005-1 ROOM=PMU 132S00200
VOLTAGE=3.3 V
PP3V3_S2 39
PP2V625_NAND_S0 30
VOLTAGE=2.625 V
138S00406 C3510 13UF 20% 6.3V X5R 0402-3 ROOM=PMU
(1) PP3V3_S2
PMU LDO Capability:
LDO1 200 mA MAX
LDO5 1300 mA MAX
VLDO2 H6 PP1V8_AUDIO_VA_S2_R
XW3520 SHORT-20L-0.05MM-SM 1 2 ROOM=PMU NO_XNET_CONNECTION
VOLTAGE=1.8 V
PP1V8_AUDIO_VA_S2 79
VLDO6 K1 SPARE_PMU_VLDO6 39
VLDO7 K4 VOLTAGE=3.0 V PACK_OPTION=MLB 998-03569 PP3V0_S2 39
VLDO10 J1 PP3V0_FLICKER_DET_VDD_S0 503
VLDO13 J4 VOLTAGE=3.15 V PP3V15_TOUCH_DISPLAY_S2 117
LDO2 50 mA MAX
LDO6 Not used
LDO7 250 mA MAX
LDO10 50 mA MAX
LDO13 50 mA MAX
138S00441 C3520 4.3UF 20% 4V X5R 201 ROOM=PMU
138S00441 C3524 4.3UF 20% 4V X5R 201 ROOM=PMU
(2) PP1V8_AUDIO_VA_S2
138S00406 C3501 13UF 20% 6.3V X5R 0402-3 ROOM=PMU
(7) PP3V0_S2
138S00071 C3515 4UF 20% 6.3V CER-X5R 201 ROOM=PMU
(10) PP3V0_REAR_LS
138S00071 C3546 4UF 20% 6.3V CER-X5R 201 ROOM=PMU
(13) PP3V15_TOUCH_DISPLAY_S2
VLDO9 J6 VOLTAGE=1.8 V PP1V8_ALWAYS 36 39
LDO9 10 mA MAX
VLDOINT K6 VOLTAGE=1.5 V PP1V5_ALWAYS 37 39
VLDO15 L6 PPVAR_BARO_S2 504
LDO15 100 mA MAX
C3590 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=PMU 138S00450
(9) PP1V8_ALWAYS
C3509 16UF 20% 4V X5R 0402-1 ROOM=PMU 138S00313
C3508 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=PMU 138S00450
C3503 220PF 5% 25V COG 1005 ROOM=PMU 131S00170
(INT) PP1V5_ALWAYS
138S00406 C3566 13UF 20% 6.3V X5R 0402-3 ROOM=PMU
(15) PPVAR_BARO_S2
VOUT_SW0 P2
VOUT_SW0 P3
BUCK3_SW0 VOLTAGE=1.825 V PP1V825_S2 39 102 111 503 504 506
VOUT_SW1 P1
BUCK3_SW1 VOLTAGE=1.825 V PP1V825_S0 39
BUCK_SW0: 700 mA MAX, 50mOhm MAX
BUCK_SW1: 700 mA MAX, 50mOhm MAX
VLDO3 G5 VOLTAGE=1.2 V PP1V2_LN_SOC_S0 39
VLDO8 G4 SPARE_PMU_VLDO8 39
VLDO14 F5 VOLTAGE=1.2 V PP1V2_TOUCH_VDDCORE_S2 117
VLDO16 F4 VOLTAGE=1.1 V PP1V1_AMPH_S2 39
VOUT_SW2 M4 BUCK6_SW2 VOLTAGE=1.24 V PP1V24_NFC_S2 142
VOUT_SW3 N1 BUCK6_SW3 VOLTAGE=1.24 V PP1V24_S2 27 39 96 102 504
VOUT_SW4 R4 BUCK6_SW4 VOLTAGE=1.24 V PP1V24_IO_SOC_S0 39
VOUT_SW4 R5
VOUT_SW5 M3 BUCK6_SW5 VOLTAGE=1.24 V PP1V24_S1 28 39
LDO3 420 mA MAX
LDO8 Not Used
LDO14 150 mA MAX
LDO16 500 mA MAX
BUCK_SW2: 200 mA MAX, 125mOhm MAX
BUCK_SW3: 200 mA MAX, 125mOhm MAX
BUCK_SW4: 890 mA MAX, 25mOhm MAX
BUCK_SW5: 150 mA MAX, 125mOhm MAX
138S00450 C3500 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=PMU
138S00313 C3530 16UF 20% 4V X5R 0402-0.1MM-1 ROOM=PMU
(3) PP1V2_SOC
* Assumes load cap <80mOhm DCR
138S00313 C3555 16UF 20% 4V X5R 0402-0.1MM-1 ROOM=PMU
(14) PP1V2_TOUCH_VDDCORE_S2
138S00313 C3565 16UF 20% 4V X5R 0402-0.1MM-1 ROOM=PMU
(16) PP1V1_AMPH_S2
138S00450 C3568 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=PMU
(SW2) PP1V2_NFC_S2
VLDO4 H4 PP_VDD_LOW_S2 39
LDO4 300 mA MAX
LDO4: Binned voltage
620mV OTP, Adjusted as low as 560mV
VLDO11 G1 VOLTAGE=0.5 V PP0V5_VDDQL_S1 39
VLDO12 H1 VOLTAGE=0.805 V PP0V805_SOC_FIXED_S1 28 39
VLDO17 F1 VOLTAGE=0.83 V PP0V83_NAND_S0 30
LDO11 850 mA MAX
LDO12 700 mA MAX
LDO17 700 mA MAX
138S00313 C3540 16UF 20% 4V X5R 0402-0.1MM-1 ROOM=PMU
(4) PP_VDD_LOW_S2
138S00071 C3527 4UF 20% 6.3V CER-X5R 201 ROOM=PMU
138S00313 C3525 16UF 20% 4V X5R 0402-0.1MM-1 ROOM=PMU
(11) PP0V5_VDDQL_S1
138S00313 C3535 16UF 20% 4V X5R 0402-0.1MM-1 ROOM=PMU
(12) PP0V805_SOC_FIXED_S1

PAGE TITLE

SYS PWR: PMU: LDOs (3/5) (35)

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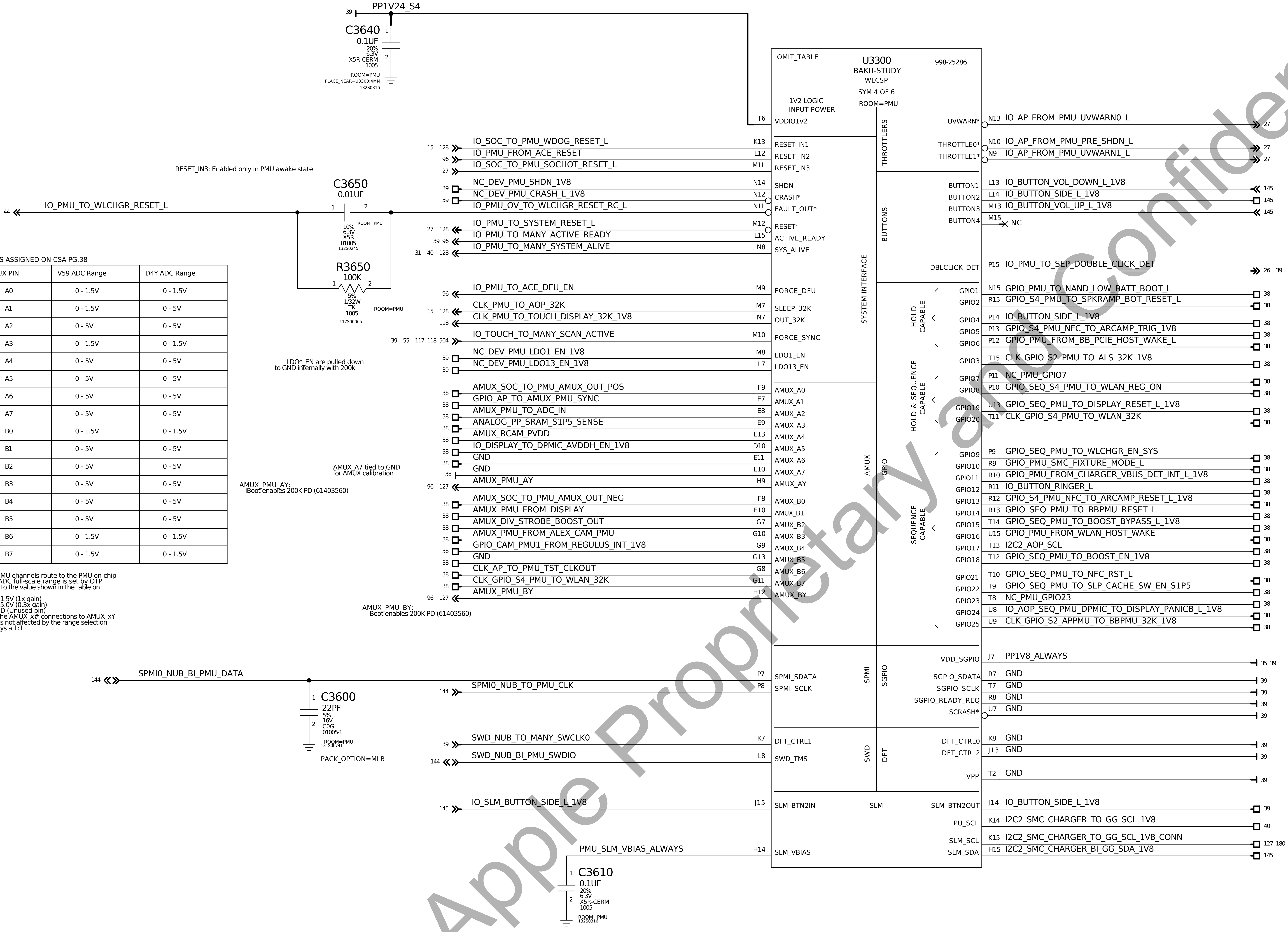
PMU - GPIOs + DIOs

AMUX PINS ASSIGNED ON CSA PG.38

AMUX PIN	V59 ADC Range	D4Y ADC Range
A0	0 - 1.5V	0 - 1.5V
A1	0 - 1.5V	0 - 5V
A2	0 - 5V	0 - 5V
A3	0 - 1.5V	0 - 1.5V
A4	0 - 5V	0 - 5V
A5	0 - 5V	0 - 5V
A6	0 - 5V	0 - 5V
A7	0 - 5V	0 - 5V
B0	0 - 1.5V	0 - 1.5V
B1	0 - 5V	0 - 5V
B2	0 - 5V	0 - 5V
B3	0 - 5V	0 - 5V
B4	0 - 5V	0 - 5V
B5	0 - 5V	0 - 5V
B6	0 - 1.5V	0 - 1.5V
B7	0 - 1.5V	0 - 1.5V

The PMU AMU channels route to the PMU on-chip ADC. The ADC full-scale range is set by OTP and locked to the value shown in the table on the left.
0 - 1.5V (1x gain)
0 - 5.0V (0.3x gain)
GND (Unused pin)
Note that the AMUX_x# connections to AMUX_xY behaviour is not affected by the range selection and is always a 1:1


PP1V24_S4
39
C3640
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=PMU
PLACE_NEAR=U3300:4MM
132S0316
U3300
BAKU-STUDY
WLCSP
SYM 4 OF 6
ROOM=PMU
OMIT_TABLE
998-25286
1V2 LOGIC INPUT POWER
T6 VDDIO1V2
SYSTEM INTERFACE
THROTTLERS
BUTTONS
AMUX
GPIO
SPMI
SGPIO
SWD
DFT
SLM
HOLD CAPABLE
HOLD & SEQUENCE CAPABLE
SEQUENCE CAPABLE
15 128 IO_SOC_TO_PMU_WDOG_RESET_L K13 RESET_IN1
96 IO_PMU_FROM_ACE_RESET L12 RESET_IN2
27 IO_SOC_TO_PMU_SOCHOT_RESET_L M11 RESET_IN3
39 NC_DEV_PMU_SHDN_1V8 N14 SHDN
39 NC_DEV_PMU_CRASH_L_1V8 N12 CRASH*
IO_PMU_OV_TO_WLCHGR_RESET_RC_L N11 FAULT_OUT*
44 IO_PMU_TO_WLCHGR_RESET_L
C3650
0.01UF
10%
6.3V
X5R
01005
132S0245
ROOM=PMU
R3650
100K
5%
1/32W
TK
1005
117S00065
ROOM=PMU
27 128 IO_PMU_TO_SYSTEM_RESET_L M12 RESET*
39 96 IO_PMU_TO_MANY_ACTIVE_READY L15 ACTIVE_READY
31 40 128 IO_PMU_TO_MANY_SYSTEM_ALIVE N8 SYS_ALIVE
96 IO_PMU_TO_ACE_DFU_EN M9 FORCE_DFU
15 128 CLK_PMU_TO_AOP_32K M7 SLEEP_32K
118 CLK_PMU_TO_TOUCH_DISPLAY_32K_1V8 N7 OUT_32K
39 55 117 118 504 IO_TOUCH_TO_MANY_SCAN_ACTIVE M10 FORCE_SYNC
39 NC_DEV_PMU_LDO1_EN_1V8 M8 LDO1_EN
39 NC_DEV_PMU_LDO13_EN_1V8 L7 LDO13_EN
38 AMUX_SOC_TO_PMU_AMUX_OUT_POS F9 AMUX_A0
38 GPIO_AP_TO_AMUX_PMU_SYNC E7 AMUX_A1
38 AMUX_PMU_TO_ADC_IN E8 AMUX_A2
38 ANALOG_PP_SRAM_S1P5_SENSE E9 AMUX_A3
38 AMUX_RCAM_PVDD E13 AMUX_A4
38 IO_DISPLAY_TO_DPMIC_AVDDH_EN_1V8 D10 AMUX_A5
38 GND E11 AMUX_A6
38 GND E10 AMUX_A7
96 127 AMUX_PMU_AY H9 AMUX_AY
38 AMUX_SOC_TO_PMU_AMUX_OUT_NEG F8 AMUX_B0
38 AMUX_PMU_FROM_DISPLAY F10 AMUX_B1
38 AMUX_DIV_STROBE_BOOST_OUT G7 AMUX_B2
38 AMUX_PMU_FROM_ALEX_CAM_PMU G10 AMUX_B3
38 GPIO_CAM_PMU1_FROM_REGULUS_INT_1V8 G9 AMUX_B4
38 GND G13 AMUX_B5
38 CLK_AP_TO_PMU_TST_CLKOUT G8 AMUX_B6
38 CLK_GPIO_S4_PMU_TO_WLAN_32K G11 AMUX_B7
96 127 AMUX_PMU_BY H12 AMUX_BY
144 SPMI0_NUB_BI_PMU_DATA P7 SPMI_SDATA
144 SPMI0_NUB_TO_PMU_CLK P8 SPMI_SCLK
C3600
22PF
5%
16V
C0G
01005-1
ROOM=PMU
131S00741
PACK_OPTION=MLB
39 SWD_NUB_TO_MANY_SWCLK0 K7 DFT_CTRL1
144 SWD_NUB_BI_PMU_SWDIO L8 SWD_TMS
145 IO_SLM_BUTTON_SIDE_L_1V8 J15 SLM_BTN2IN
PMU_SLM_VBIAS_ALWAYS H14 SLM_VBIAS
C3610
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=PMU
132S0316
UVWARN* N13 IO_AP_FROM_PMU_UVWARN0_L 27
THROTTLE0* N10 IO_AP_FROM_PMU_PRE_SHDN_L 27
THROTTLE1* N9 IO_AP_FROM_PMU_UVWARN1_L 27
BUTTON1 L13 IO_BUTTON_VOL_DOWN_L_1V8 145
BUTTON2 L14 IO_BUTTON_SIDE_L_1V8 145
BUTTON3 M13 IO_BUTTON_VOL_UP_L_1V8 145
BUTTON4 M15 NC
DBLCLICK_DET P15 IO_PMU_TO_SEP_DOUBLE_CLICK_DET 26 39 128
GPIO1 N15 GPIO_PMU_TO_NAND_LOW_BATT_BOOT_L 38
GPIO2 R15 GPIO_S4_PMU_TO_SPKRAMP_BOT_RESET_L 38
GPIO4 P14 IO_BUTTON_SIDE_L_1V8 38
GPIO5 P13 GPIO_S4_PMU_NFC_TO_ARCAMP_TRIG_1V8 38
GPIO6 P12 GPIO_PMU_FROM_BB_PCIE_HOST_WAKE_L 38
GPIO3 T15 CLK_GPIO_S2_PMU_TO_ALS_32K_1V8 38
GPIO7 P11 NC_PMU_GPIO7 38
GPIO8 P10 GPIO_SEQ_S4_PMU_TO_WLAN_REG_ON 38
GPIO19 U13 GPIO_SEQ_PMU_TO_DISPLAY_RESET_L_1V8 38
GPIO20 T11 CLK_GPIO_S4_PMU_TO_WLAN_32K 38
GPIO9 P9 GPIO_SEQ_PMU_TO_WLCHGR_EN_SYS 38
GPIO10 R9 GPIO_PMU_SMC_FIXTURE_MODE_L 38
GPIO11 R10 GPIO_PMU_FROM_CHARGER_VBUS_DET_INT_L_1V8 38
GPIO12 R11 IO_BUTTON_RINGER_L 38
GPIO13 R12 GPIO_S4_PMU_NFC_TO_ARCAMP_RESET_L_1V8 38
GPIO14 R13 GPIO_SEQ_PMU_TO_BBPMU_RESET_L 38
GPIO15 T14 GPIO_SEQ_PMU_TO_BOOST_BYPASS_L_1V8 38
GPIO16 U15 GPIO_PMU_FROM_WLAN_HOST_WAKE 38
GPIO17 T13 I2C2_AOP_SCL 38
GPIO18 T12 GPIO_SEQ_PMU_TO_BOOST_EN_1V8 38
GPIO21 T10 GPIO_SEQ_PMU_TO_NFC_RST_L 38
GPIO22 T9 GPIO_SEQ_PMU_TO_SLP_CACHE_SW_EN_S1P5 38
GPIO23 T8 NC_PMU_GPIO23 38
GPIO24 U8 IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L_1V8 38
GPIO25 U9 CLK_GPIO_S2_APPMU_TO_BBPMU_32K_1V8 38
VDD_SGPIO J7 PP1V8_ALWAYS 35 39
SGPIO_SDATA R7 GND 39
SGPIO_SCLK T7 GND 39
SGPIO_READY_REQ R8 GND 39
SCRASH* U7 GND 39
DFT_CTRL0 K8 GND 39
DFT_CTRL2 J13 GND 39
VPP T2 GND 39
SLM_BTN2OUT J14 IO_BUTTON_SIDE_L_1V8 39
PU_SCL K14 I2C2_SMC_CHARGER_TO_GG_SCL_1V8 40
SLM_SCL K15 I2C2_SMC_CHARGER_TO_GG_SCL_1V8_CONN 127 180 504
SLM_SDA H15 I2C2_SMC_CHARGER_BI_GG_SDA_1V8 145

RESET_IN3: Enabled only in PMU awake state

LDO*_EN are pulled down to GND internally with 200k

AMUX_A7 tied to GND for AMUX calibration

AMUX_PMU_AY:
iBoot enables 200K PD (61403560)

AMUX_PMU_BY:
iBoot enables 200K PD (61403560)

PAGE TITLE
SYS PWR: PMU: GPIO (4/5) (36)

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BATTERY CURRENT SENSE FILTER
#: 48608248
42 ANALOG_PMU_IBATT_VCC_SENSE_R_N
R3700
1K
1 2
ROOM=PMU
1%
1/32W
TK
1005
118S00255
C3700
0.22UF
10%
6.3V
CER-X5R
1005
ROOM=PMU
132S00014
NO_XNET_CONNECTION
ANALOG_PMU_IBATT_VCC_SENSE_N
42 ANALOG_PMU_IBATT_VCC_SENSE_R_P
R3701
1K
ROOM=PMU
1%
1/32W
TK
1005
118S00255
ANALOG_PMU_IBATT_VCC_SENSE_P
39 GND
50 ANALOG_PMU_BATT_VCC_SENSE
#: 48731558
R3702
9.53K
1%
1/32W
TK
1005
ROOM=PMU
CRITICAL
118S00246
ANALOG_PMU_BATT_VCC_SENSE_FILT
C3701
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=PMU
132S0316
INTERNAL 1MOHM PULLDOWN ON ADC_IN
38 AMUX_PMU_TO_ADC_IN
BATTERY VOLTAGE SENSE FILTER
3 dB down frequency
approx. 360 Hz due to voltage derating of cap C3701
Goal is <0.5 dB down at 100 Hz. for both V and I measurements
37 CLK_PMU_XTAL2_XOUT_32K
C3703
1PF
+/-0.1PF
16V
NP0/C0G
01005
ROOM=PMU
CRITICAL
131S00342
35 39 PP1V5_ALWAYS
XW3721
SHORT-01005
IO_PMU_XTAL_SEL_1V5
OMIT_TABLE
U3300
BAKU-STUDY
WLCSP
SYM 5 OF 6
ROOM=PMU
998-25286
J11 IBAT
J10 VBAT
E14 BRICK_ID1
E12 BRICK_ID2
H11 ADC_IN
E1 XIN
D1 XOUT
E2 VSS
L11 NXTAL_MEMS
ADC
NTC
32KHZ OSCILLATOR
REFERENCES
TDEV1 F11 NTC_FOREHEAD_P 49
TDEV2 F12 NTC_RADIO_BB_P 504
TDEV3 F13 NTC_RADIO_PA_P 503
TDEV4 F14 NTC_AP_P 49
TDEV5 G12 NTC_BATTERY_P 49
TCAL E15 ANALOG_PMU_TCAL
VREF_ADC H10 ANALOG_PMU_VREF_ADC
VREF K11 ANALOG_PMU_VREF
VSS_REF J12 ANALOG_PMU_VSS_REF
TCAL RESISTOR
MUST BE 0.1%
R3703
3.92K
0.1%
1/32W
TK
01005-1
ROOM=PMU
103S00558
#
49239106
C3704
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=PMU
138S00450
C3705
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=PMU
132S0316
ANALOG_PMU_VSS_VREF_ADC
PLACE_NEAR=U3300.J12:1MM
XW3701
SHORT-20L-0.05MM-SM
ROOM=PMU
PLACE_NEAR=U3300.K12:1MM
998-03569
XW3702
SHORT-20L-0.05MM-SM
ROOM=PMU
PLACE_NEAR=U3300.K12:1MM
998-03569
MEMS Oscillator (Active)
PP1V8_ALWAYS 37 39
132S00030
C3709
0.1UF
10%
10V
X6S-CERM
0201
ROOM=PMU
Y3701
32.768KHZ
CSP-1
VDD
NC
CLKOUT
GND
197S00437
ROOM=PMU
NC
CLK_PMU_XTAL2_XOUT_32K_R
37
117S00067
R3720
0
0%
1/32W
TK
1005
ROOM=PMU
CLK_PMU_XTAL2_XOUT_32K 37
MEMS Oscillator (ALT)
PP1V8_ALWAYS_R
R3705
0
0%
1/32W
TK
1005
ROOM=PMU
BOMOPTION=NOSTUFF
117S00067
PP1V8_ALWAYS 37 39
C3706
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=PMU
BOMOPTION=NOSTUFF
132S0316
Y3702
32.768KHZ
CSP-1
VDD
NC
CLKOUT
GND
197S00437
BOMOPTION=NOSTUFF
ROOM=PMU
NC
CLK_PMU_XTAL2_XOUT_32K_ALT_R1
R3704
0
0%
1/32W
TK
1005
ROOM=PMU
BOMOPTION=NOSTUFF
117S00067
CLK_PMU_XTAL2_XOUT_32K_R 37
VDD_MAIN_SNS: Drop single via to VDD_MAIN plane,
place XW3703 directly at the via to the plane
39 PP_VDD_MAIN
5mA (MAX)
ROOM=PMU
XW3703
SHORT-20L-0.05MM-SM
998-03569
NO_XNET_CONNECTION
ANALOG_PMU_VDD_MAIN_SNS
39 PP1V5_ALWAYS
60mA (MAX)
OMIT_TABLE
U3300
BAKU-STUDY
WLCSP
SYM 6 OF 6
ROOM=PMU
998-25286
E4 VDD_MAIN
E16 VDD_MAIN
K9 VDD_MAIN
U3 VDD_MAIN
U16 VDD_MAIN
K10 VDD_MAIN_SNS
C3 VDD_ANA
C7 VDD_ANA
C11 VDD_ANA
C15 VDD_ANA
C17 VDD_ANA
G17 VDD_ANA
H7 VDD_ANA
L9 VDD_ANA
L17 VDD_ANA
N5 VDD_ANA
R17 VDD_ANA
U10 VDD_ANA
V3 VDD_ANA
V7 VDD_ANA
V13 VDD_ANA
V17 VDD_ANA
D16 VDD_DIG
E5 VDD_DIG
J8 VDD_DIG
M14 VDD_DIG
R14 VDD_DIG
T5 VDD_DIG
U1 VSS
U5 VSS
U17 VSS
V1 VSS
V5 VSS
V8 VSS
V9 VSS
V10 VSS
V11 VSS
V12 VSS
V15 VSS
V16 VSS
V18 VSS
W14 VSS
VSS A16
VSS B10
VSS B16
VSS B17
VSS C1
VSS C5
VSS C8
VSS C9
VSS C10
VSS C13
VSS C16
VSS D3
VSS D5
VSS D7
VSS D11
VSS D13
VSS D15
VSS D17
VSS E6
VSS E17
VSS F7
VSS F15
VSS F16
VSS F17
VSS F18
VSS G14
VSS G15
VSS H8
VSS H13
VSS H17
VSS J16
VSS J17
VSS K12
VSS K16
VSS K17
VSS L16
VSS M6
VSS M17
VSS N6
VSS N17
VSS P6
VSS P16
VSS P17
VSS P18
VSS R6
VSS R16
VSS T1
VSS T3
VSS T4

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SYS PWR: PMU: Misc (5/5) (37)

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PMU GPIOs

PMU_GPIO1 36 GPIO_PMU_TO_NAND_LOW_BATT_BOOT_L 31 128
PMU_GPIO2 36 GPIO_S4_PMU_TO_SPKRAMP_BOT_RESET_L 128 505
PMU_GPIO3 36 CLK_GPIO_S2_PMU_TO_ALS_32K_1V8 111
PMU_GPIO4 36 IO_BUTTON_SIDE_L_1V8 39 128 145
PMU_GPIO5 36 GPIO_S4_PMU_NFC_TO_ARCAMP_TRIG_1V8 82 505
PMU_GPIO6 36 GPIO_PMU_FROM_BB_PCIE_HOST_WAKE_L 503
PMU_GPIO7 36 NC_PMU_GPIO7 NO_TEST=TRUE
PMU_GPIO8 36 GPIO_SEQ_S4_PMU_TO_WLAN_REG_ON 503
PMU_GPIO9 36 GPIO_SEQ_PMU_TO_WLCHGR_EN_SYS 144
PMU_GPIO10 36 GPIO_PMU_SMC_FIXTURE_MODE_L 126
PMU_GPIO11 36 GPIO_PMU_FROM_CHARGER_VBUS_DET_INT_L_1V8 40 128
PMU_GPIO12 36 IO_BUTTON_RINGER_L 26 503
PMU_GPIO13 36 GPIO_S4_PMU_NFC_TO_ARCAMP_RESET_L_1V8 82 505
PMU_GPIO14 36 GPIO_SEQ_PMU_TO_BBPMU_RESET_L 503
PMU_GPIO15 36 GPIO_SEQ_PMU_TO_BOOST_BYPASS_L_1V8 43 128
PMU_GPIO16 36 GPIO_PMU_FROM_WLAN_HOST_WAKE 503
PMU_GPIO17 36 I2C2_AOP_SCL 16 25 506
PMU_GPIO18 36 GPIO_SEQ_PMU_TO_BOOST_EN_1V8 42 43
PMU_GPIO19 36 GPIO_SEQ_PMU_TO_DISPLAY_RESET_L_1V8 93 118
PMU_GPIO20 36 CLK_GPIO_S4_PMU_TO_WLAN_32K 38 503
PMU_GPIO21 36 GPIO_SEQ_PMU_TO_NFC_RST_L 142
PMU_GPIO22 36 GPIO_SEQ_PMU_TO_SLP_CACHE_SW_EN_S1P5 45 128
PMU_GPIO23 36 NC_PMU_GPIO23 NO_TEST=TRUE
PMU_GPIO24 36 IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L_1V8 93 102 118
PMU_GPIO25 36 CLK_GPIO_S2_APPMU_TO_BBPMU_32K_1V8 504
R3800 1 2 200K 1% 1/32W TK 01005-1 ROOM=ARC PACK_OPTION=MLB 118S00257
R3801 1 2 200K 1% 1/32W TK 01005-1 ROOM=ARC PACK_OPTION=MLB 118S00257
56925452 Tie I2C2_AOP_SCL_SEQ to PMU GPIO17 to mitigate Allston/LPEM issue
PMU_AMUX_AO 36 AMUX_SOC_TO_PMU_AMUX_OUT_POS 10 128
PMU_AMUX_A1 36 GPIO_AP_TO_AMUX_PMU_SYNC 26
PMU_AMUX_A2 36 AMUX_PMU_TO_ADC_IN 37
PMU_AMUX_A3 36 ANALOG_PP_SRAM_S1P5_SENSE 45
PMU_AMUX_A4 36 AMUX_RCAM_PVDD 62
PMU_AMUX_A5 36 IO_DISPLAY_TO_DPMIC_AVDDH_EN_1V8 93 118
PMU_AMUX_A6 36 GND 38 39 503 504 505 506 507
PMU_AMUX_A7 36 GND 38 39 503 504 505 506 507
PMU_AMUX_BO 36 AMUX_SOC_TO_PMU_AMUX_OUT_NEG 10 128
PMU_AMUX_B1 36 AMUX_PMU_FROM_DISPLAY 93
PMU_AMUX_B2 36 AMUX_DIV_STROBE_BOOST_OUT 65
PMU_AMUX_B3 36 AMUX_PMU_FROM_ALEX_CAM_PMU 54 62
PMU_AMUX_B4 36 GPIO_CAM_PMU1_FROM_REGULUS_INT_1V8 55 70 128
PMU_AMUX_B5 36 GND 38 39 503 504 505 506 507
PMU_AMUX_B6 36 CLK_AP_TO_PMU_TST_CLKOUT 10 129
PMU_AMUX_B7 36 CLK_GPIO_S4_PMU_TO_WLAN_32K 38 503

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SYS PWR: PMU: Aliases: GPIO (38)

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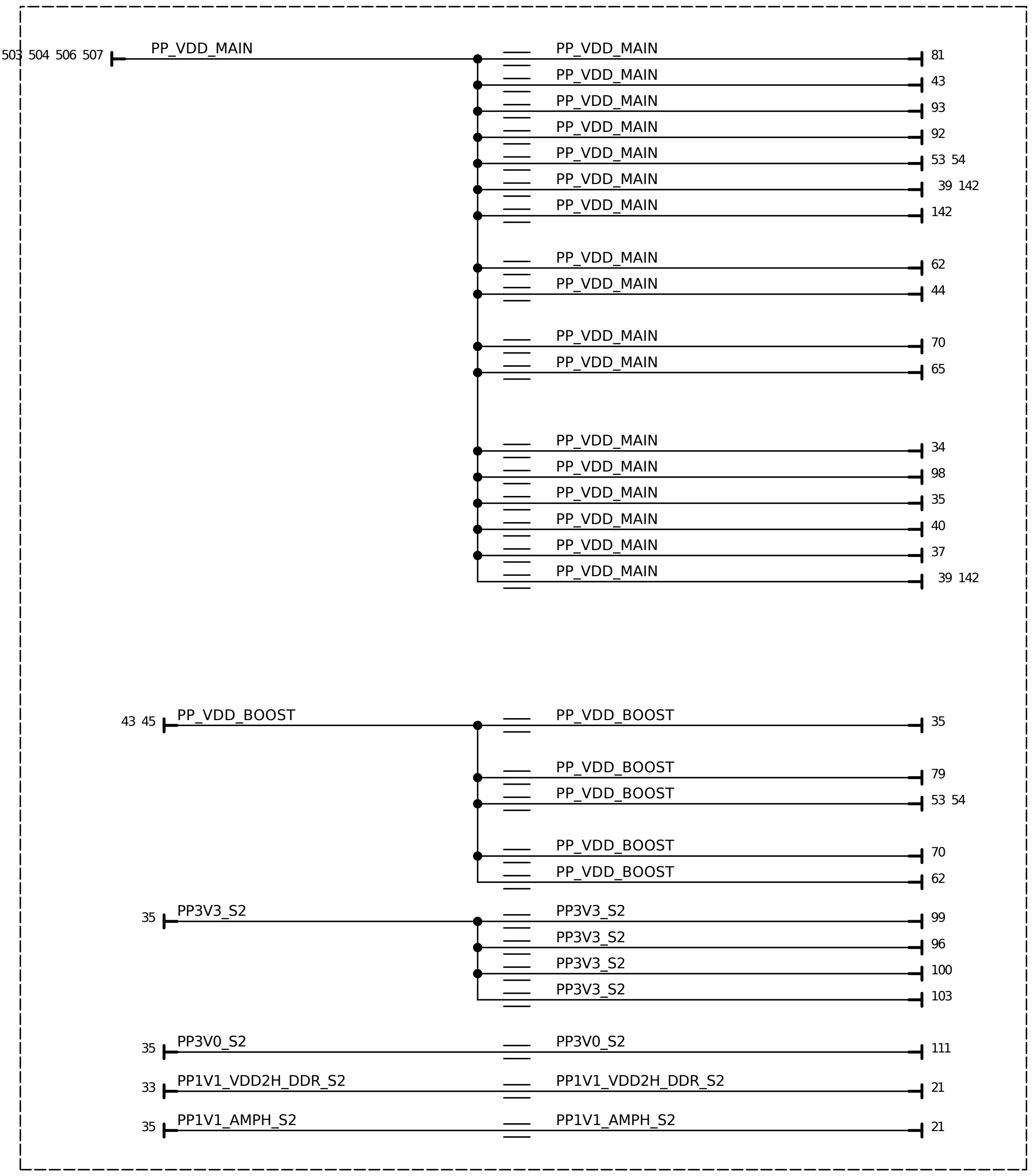
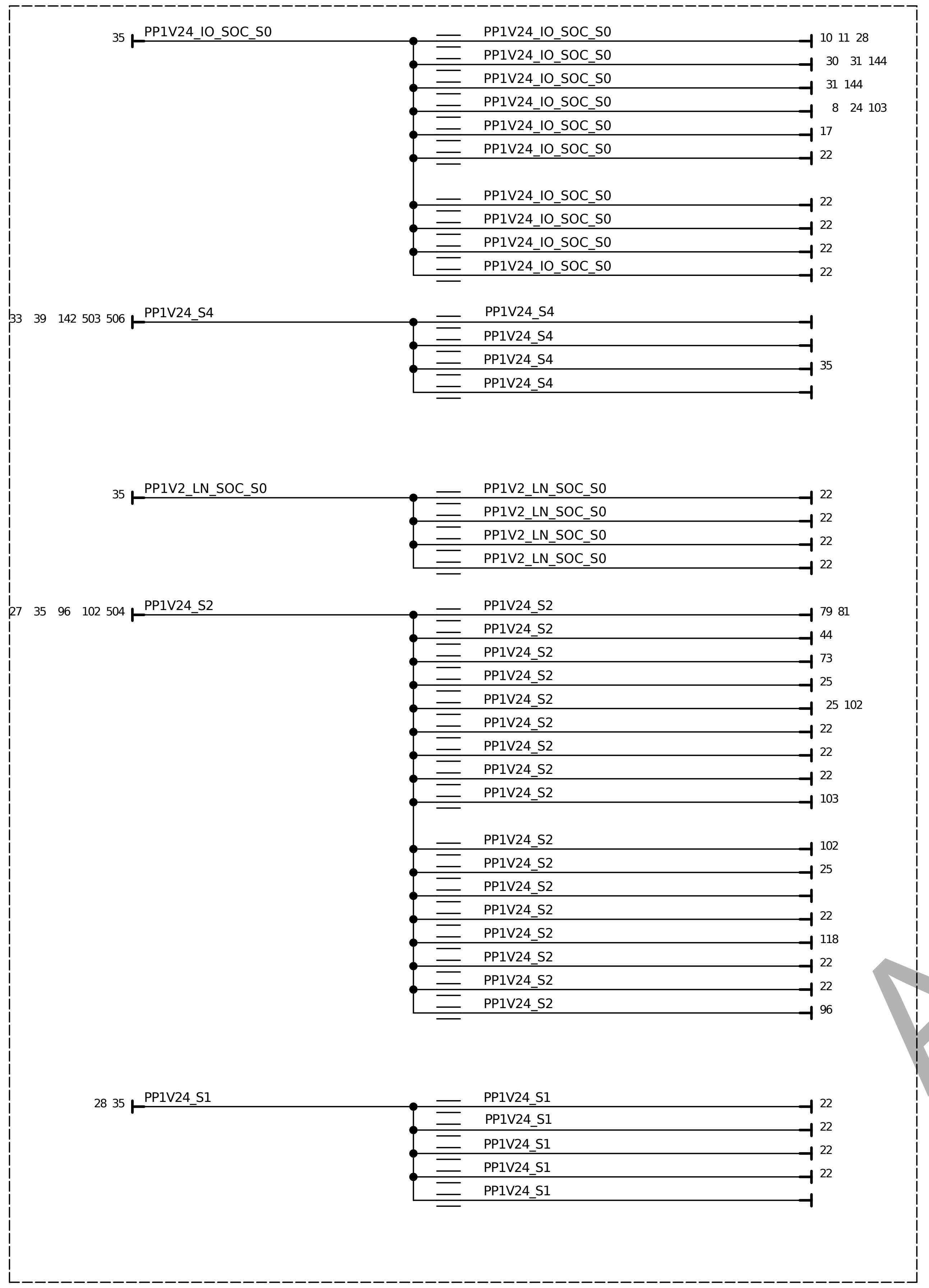
PP Misc Domains



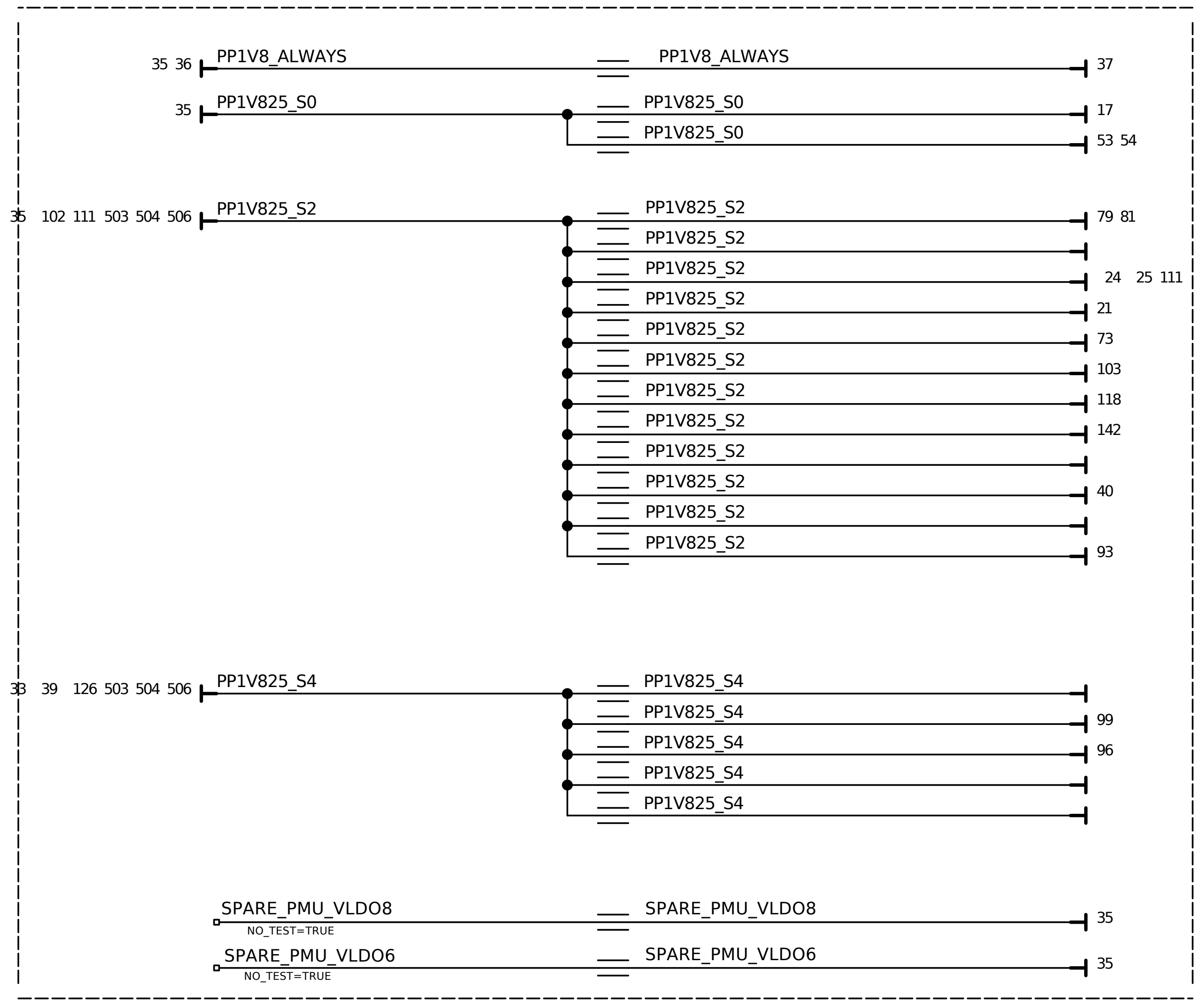
40 42 126 503 504 506 507 PP_VDD_MAIN
PP_VDD_MAIN 81
PP_VDD_MAIN 43
PP_VDD_MAIN 93
PP_VDD_MAIN 92
PP_VDD_MAIN 53 54
PP_VDD_MAIN 39 142
PP_VDD_MAIN 142
PP_VDD_MAIN 62
PP_VDD_MAIN 44
PP_VDD_MAIN 70
PP_VDD_MAIN 65
PP_VDD_MAIN 34
PP_VDD_MAIN 98
PP_VDD_MAIN 35
PP_VDD_MAIN 40
PP_VDD_MAIN 37
PP_VDD_MAIN 39 142
43 45 PP_VDD_BOOST
PP_VDD_BOOST 35
PP_VDD_BOOST 79
PP_VDD_BOOST 53 54
PP_VDD_BOOST 70
PP_VDD_BOOST 62
35 PP3V3_S2
PP3V3_S2 99
PP3V3_S2 96
PP3V3_S2 100
PP3V3_S2 103
35 PP3V0_S2
PP3V0_S2 111
33 PP1V1_VDD2H_DDR_S2
PP1V1_VDD2H_DDR_S2 21
35 PP1V1_AMPH_S2
PP1V1_AMPH_S2 21

PP1V2 Domains



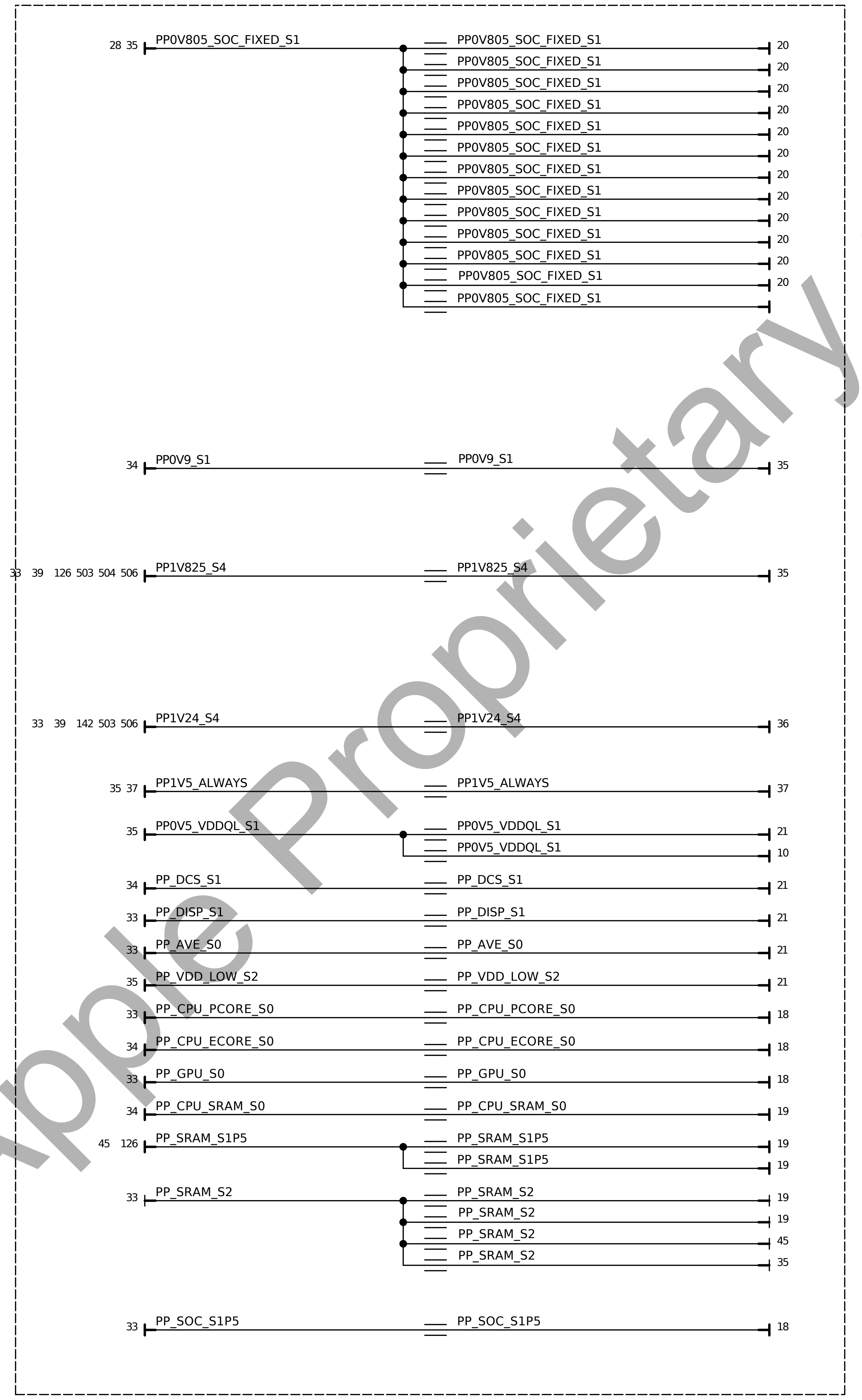
35 PP1V24_IO_SOC_S0
PP1V24_IO_SOC_S0 10 11 28
PP1V24_IO_SOC_S0 30 31 144
PP1V24_IO_SOC_S0 31 144
PP1V24_IO_SOC_S0 8 24 103
PP1V24_IO_SOC_S0 17
PP1V24_IO_SOC_S0 22
PP1V24_IO_SOC_S0 22
PP1V24_IO_SOC_S0 22
PP1V24_IO_SOC_S0 22
PP1V24_IO_SOC_S0 22
33 39 142 503 506 PP1V24_S4
PP1V24_S4
PP1V24_S4
PP1V24_S4 35
PP1V24_S4
35 PP1V2_LN_SOC_S0
PP1V2_LN_SOC_S0 22
PP1V2_LN_SOC_S0 22
PP1V2_LN_SOC_S0 22
PP1V2_LN_SOC_S0 22
27 35 96 102 504 PP1V24_S2
PP1V24_S2 79 81
PP1V24_S2 44
PP1V24_S2 73
PP1V24_S2 25
PP1V24_S2 25 102
PP1V24_S2 22
PP1V24_S2 22
PP1V24_S2 22
PP1V24_S2 103
PP1V24_S2 102
PP1V24_S2 25
PP1V24_S2 22
PP1V24_S2 118
PP1V24_S2 22
PP1V24_S2 22
PP1V24_S2 96
28 35 PP1V24_S1
PP1V24_S1 22
PP1V24_S1 22
PP1V24_S1 22
PP1V24_S1 22
PP1V24_S1

PP1V8 Domains



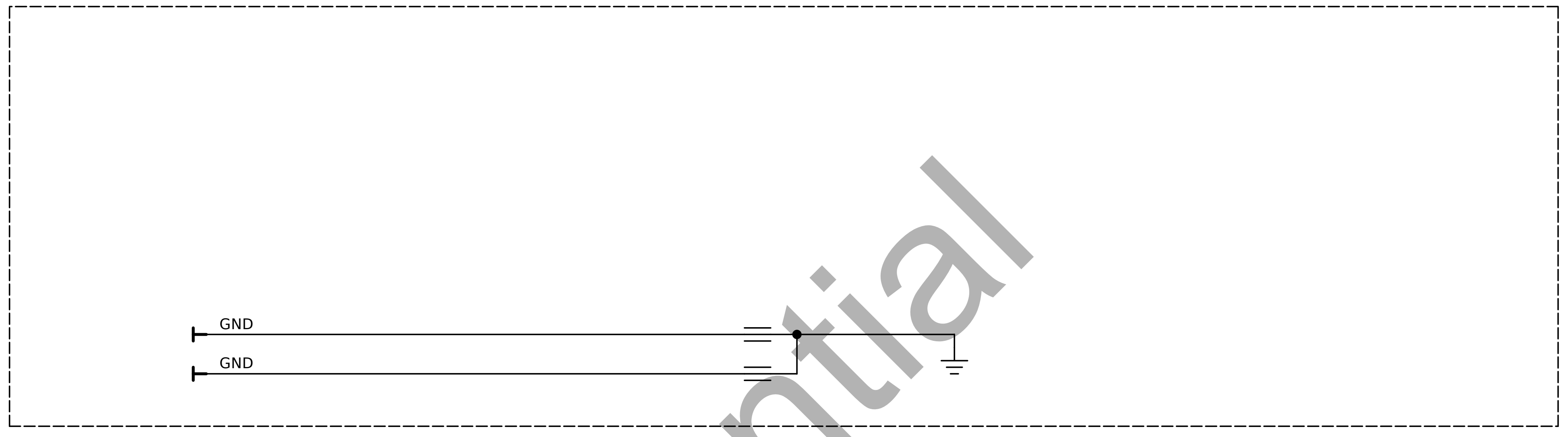
35 36 PP1V8_ALWAYS
PP1V8_ALWAYS 37
35 PP1V825_S0
PP1V825_S0 17
PP1V825_S0 53 54
35 102 111 503 504 506 PP1V825_S2
PP1V825_S2 79 81
PP1V825_S2
PP1V825_S2 24 25 111
PP1V825_S2 21
PP1V825_S2 73
PP1V825_S2 103
PP1V825_S2 118
PP1V825_S2 142
PP1V825_S2
PP1V825_S2 40
PP1V825_S2
PP1V825_S2 93
33 39 126 503 504 506 PP1V825_S4
PP1V825_S4
PP1V825_S4 99
PP1V825_S4 96
PP1V825_S4
PP1V825_S4
SPARE_PMU_VLDO8 NO_TEST=TRUE
SPARE_PMU_VLDO8 35
SPARE_PMU_VLDO6 NO_TEST=TRUE
SPARE_PMU_VLDO6 35

SOC + PMU Power Assignments

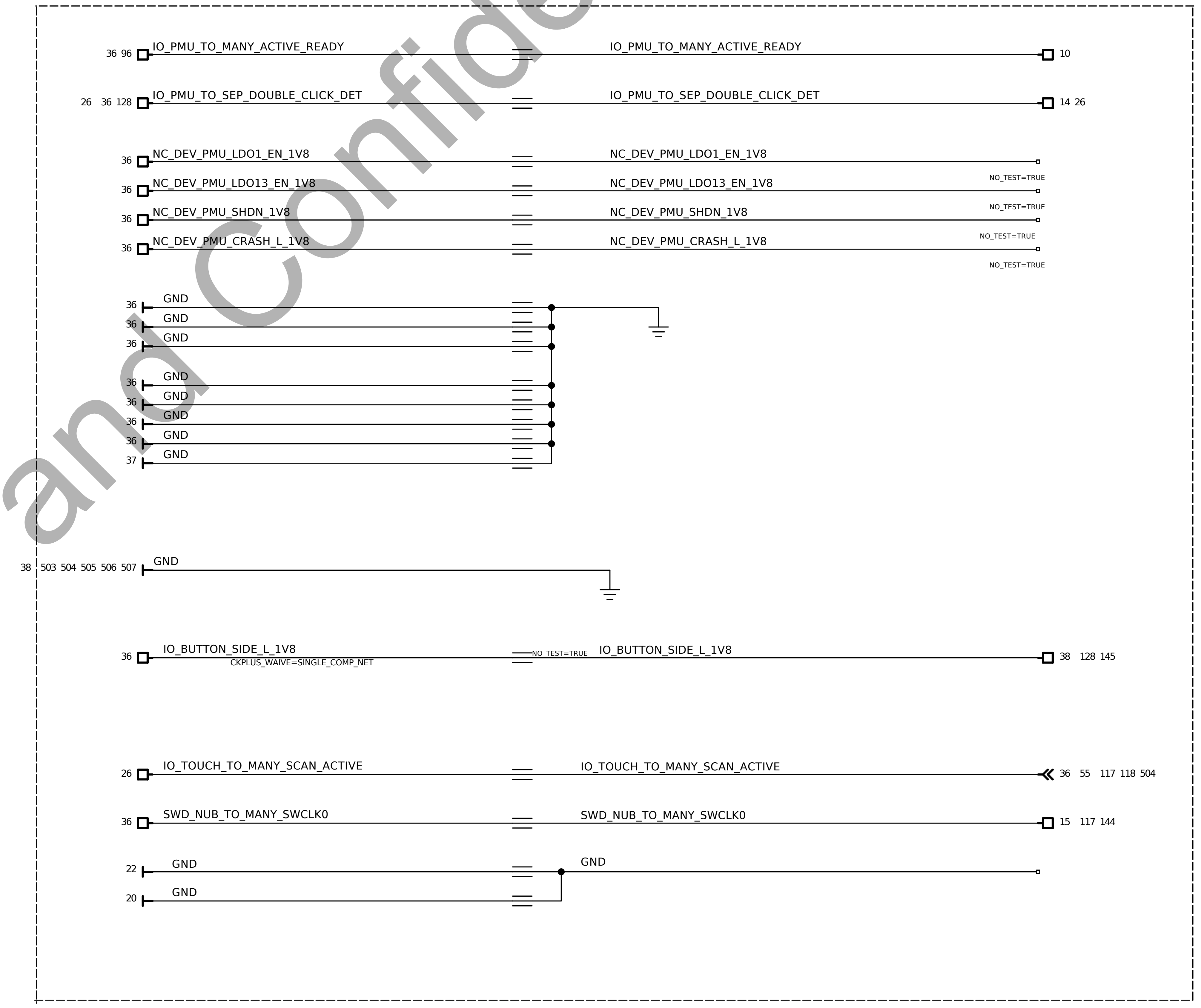


28 35 PP0V805_SOC_FIXED_S1
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1 20
PP0V805_SOC_FIXED_S1
34 PP0V9_S1
PP0V9_S1 35
33 39 126 503 504 506 PP1V825_S4
PP1V825_S4 35
33 39 142 503 506 PP1V24_S4
PP1V24_S4 36
35 37 PP1V5_ALWAYS
PP1V5_ALWAYS 37
35 PP0V5_VDDQL_S1
PP0V5_VDDQL_S1 21
PP0V5_VDDQL_S1 10
34 PP_DCS_S1
PP_DCS_S1 21
33 PP_DISP_S1
PP_DISP_S1 21
33 PP_AVE_S0
PP_AVE_S0 21
35 PP_VDD_LOW_S2
PP_VDD_LOW_S2 21
33 PP_CPU_PCORE_S0
PP_CPU_PCORE_S0 18
34 PP_CPU_ECORE_S0
PP_CPU_ECORE_S0 18
33 PP_GPU_S0
PP_GPU_S0 18
34 PP_CPU_SRAM_S0
PP_CPU_SRAM_S0 19
45 126 PP_SRAM_S1P5
PP_SRAM_S1P5 19
PP_SRAM_S1P5 19
33 PP_SRAM_S2
PP_SRAM_S2 19
PP_SRAM_S2 19
PP_SRAM_S2 45
PP_SRAM_S2 35
33 PP_SOC_S1P5
PP_SOC_S1P5 18

DEV Board Compatability



PMU Dedicated IO Assignments



36 96 IO_PMU_TO_MANY_ACTIVE_READY
IO_PMU_TO_MANY_ACTIVE_READY 10
26 36 128 IO_PMU_TO_SEP_DOUBLE_CLICK_DET
IO_PMU_TO_SEP_DOUBLE_CLICK_DET 14 26
36 NC_DEV_PMU_LDO1_EN_1V8
NC_DEV_PMU_LDO1_EN_1V8 NO_TEST=TRUE
36 NC_DEV_PMU_LDO13_EN_1V8
NC_DEV_PMU_LDO13_EN_1V8 NO_TEST=TRUE
36 NC_DEV_PMU_SHDN_1V8
NC_DEV_PMU_SHDN_1V8 NO_TEST=TRUE
36 NC_DEV_PMU_CRASH_L_1V8
NC_DEV_PMU_CRASH_L_1V8 NO_TEST=TRUE
36 GND
36 GND
36 GND
36 GND
36 GND
36 GND
36 GND
37 GND
38 503 504 505 506 507 GND
36 IO_BUTTON_SIDE_L_1V8
CKPLUS_WAIVE=SINGLE_COMP_NET
NO_TEST=TRUE
IO_BUTTON_SIDE_L_1V8 38 128 145
26 IO_TOUCH_TO_MANY_SCAN_ACTIVE
IO_TOUCH_TO_MANY_SCAN_ACTIVE 36 55 117 118 504
36 SWD_NUB_TO_MANY_SWCLK0
SWD_NUB_TO_MANY_SWCLK0 15 117 144
22 GND
20 GND
GND

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SYS PWR: PMU: Aliases: Misc. (39)

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SUBSYSTEM SPECIFIC BOM TABLES

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
152S01596	152S01595	L4000-L4002	TAIYO,1UH,20%,4.7A,33MO,H=0.95,2520

CHARGER

INPUTS
OUTPUTS
U4000
D2834B0N1
WLCSP
338S01033
CRITICAL
ROOM=CHARGER
PP_VBUS1_E85
95 126 180 505
C4001 2.2UF 20% 25V X5R 0402-6 ROOM=CHARGER 138S00246
C4009 2.2UF 20% 25V X5R 0402-6 ROOM=CHARGER 138S00246
C4001 2.2UF 20% 25V X5R 0402-6 ROOM=CHARGER PACK_IGNORE=TRUE PACK_OPTION=DEV 138S00070
C4002 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
C4003 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
C4081 330PF 10% 25V X7R 201 ROOM=CHARGER 132S00051
C4080 0.47UF 20% 25V X5R 201 ROOM=CHARGER 132S00088
A11 B11 C11 D9 D10 D11 VBUS1
PP_CHARGER_VMID1
A9 A10 B10 C9 C10 VMID1
C4004 2.2UF 20% 25V X5R 0402-6 138S00246
C4010 2.2UF 20% 25V X5R 0402-6 ROOM=CHARGER 138S00246
C4010 2.2UF 20% 25V X5R 0402-6 ROOM=CHARGER PACK_IGNORE=TRUE PACK_OPTION=DEV 138S00070
C4022 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
C4023 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
PP_CHARGER_VMID2
E9 E10 F1 F9 F10 G1 G9 G10 H1 H10 J1 J9 J10 VMID2
C4011 4.7UF 20% 25V X5R 0402-2 ROOM=CHARGER 138S00240
C4012 4.7UF 20% 25V X5R 0402-2 ROOM=CHARGER 138S00240
C4024 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
C4025 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
C4026 470PF 2% 25V NP0-C0G 201 ROOM=CHARGER NOSTUFF 131S00016
NC E2 BST_FB
PP_VBUS2_WLCHGR
44
E11 F11 G11 H11 J11 VBUS2
C4005 4.7UF 20% 25V X5R 0402-2 ROOM=CHARGER 138S00240
C4006 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
C4007 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
C4008 0.47UF 20% 25V X5R 201 ROOM=CHARGER 132S00088
C4013 470PF 2% 25V NP0-C0G 201 ROOM=CHARGER 131S00016
NC D8 AUX1
25 I2C2_SMC_SCL A3 SCL0
25 I2C2_SMC_SDA B3 SDA0
A2 SCL1
B2 SDA1
VBUS1_VALID: RUBICON INTERNAL 100K PU TO AVDD
31 36 128 IO_PMU_TO_MANY_SYSTEM_ALIVE C2 SYS_ALIVE
96 126 IO_ACE_TO_CHARGER_VBUS1_VALID_L_HV D3 B1VLD*
38 128 GPIO_PMU_FROM_CHARGER_VBUS_DET_INT_L_1V8 F2 INT*
NC C3 BUCK_ON
D2 BST_EN
B1 BST_FPWM
NC A4 BST_DIS*
50 NTC_CHARGER_P E1 NTC
NC A1 NC
A5 A6 B6 C6 H5 H6 J4 J5 J6 PGND
39 PP1V825_S2
Not Stuffed for SLM
R4000 2.2K 5% 1/32W TK 01005-1 ROOM=CHARGER 117S00071
NOSTUFF
R4001 2.2K 5% 1/32W TK 01005-1 ROOM=CHARGER 117S00071
36 I2C2_SMC_CHARGER_TO_GG_SCL_1V8
127 145 180 504 I2C2_SMC_CHARGER_BI_GG_SDA_1V8
BT1 C8 CHARGER_BOOT1 DIDT=TRUE
NO_XNET_CONNECTION C4041 0.1UF 20% 10V X5R 01005-1 ROOM=CHARGER 132S00200
SW1 A7 A8 B7 B8 B9 LX1_CHARGER DIDT=TRUE
C4030 150PF 5% 25V C0G 01005 ROOM=CHARGER 131S00159
L4001 1UH-20%-4.7A-0.025OHM PIWG2520SE-SM 152S01595 ROOM=CHARGER
BT2 G8 CHARGER_BOOT2 DIDT=TRUE
NO_XNET_CONNECTION C4040 0.1UF 20% 10V X5R 01005-1 ROOM=CHARGER 132S00200
SW2 H7 H8 H9 J7 J8 LX2_CHARGER DIDT=TRUE
NOSTUFF C4031 220PF 5% 25V COG 1005 ROOM=CHARGER 131S00170
L4002 1UH-20%-4.7A-0.025OHM PIWG2520SE-SM 152S01595 ROOM=CHARGER
BT3 G2 CHARGER_BOOT3 DIDT=TRUE
NO_XNET_CONNECTION C4044 0.1UF 20% 10V X5R 01005-1 ROOM=CHARGER 132S00200
SW3 H2 H3 H4 J2 J3 LX3_CHARGER DIDT=TRUE
NOSTUFF C4032 220PF 5% 25V COG 1005 ROOM=CHARGER 131S00170
L4000 1UH-20%-4.7A-0.025OHM PIWG2520SE-SM 152S01595 ROOM=CHARGER
PP_VDD_MAIN
VOLTAGE=3.8 V
39 42 126 503 504 506 507
CRITICAL C4090 15UF 20% 6.3V X5R 0402-1 ROOM=CHARGER 138S00003
CRITICAL C4091 15UF 20% 6.3V X5R 0402-1 ROOM=CHARGER 138S00003
CRITICAL C4092 15UF 20% 6.3V X5R 0402-1 ROOM=CHARGER 138S00003
C4045 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
C4042 220PF 5% 25V CER-C0G 1005 ROOM=CHARGER 131S00543
C4043 220PF 5% 25V C0G 01005-1 ROOM=CHARGER 131S00653
B4 B5 VDDP
PP_VDD_MAIN 39
C4 VDDS ANALOG_CHARGER_VDDS_SENSE_P 50
D4 VDDS_N ANALOG_CHARGER_VDDS_SENSE_N 50
C1 RSP ANALOG_CHARGER_VDD_MAIN_ISNS_P 42
D1 RSN ANALOG_CHARGER_VDD_MAIN_ISNS_N 42
C7 F3 F7 PVDD
PP3V3_CHARGER_PVDD_LDO_INTERNAL VOLTAGE=3.3 V
F8 AVDD
PP3V3_CHARGER_AVDD_LDO_INTERNAL VOLTAGE=3.3 V
C4063 2.2UF 20% 10V X5R 201 ROOM=CHARGER 138S00136
C4064 4.7UF 20% 10V X5R-CERM 0402-0.1MM ROOM=CHARGER 138S00119
C5 D5 D6 D7 E3 E4 E5 E6 E7 E8 F4 F5 F6 G3 G4 G5 G6 G7 AGND

PAGE TITLE

SYS PWR: Charger (40)

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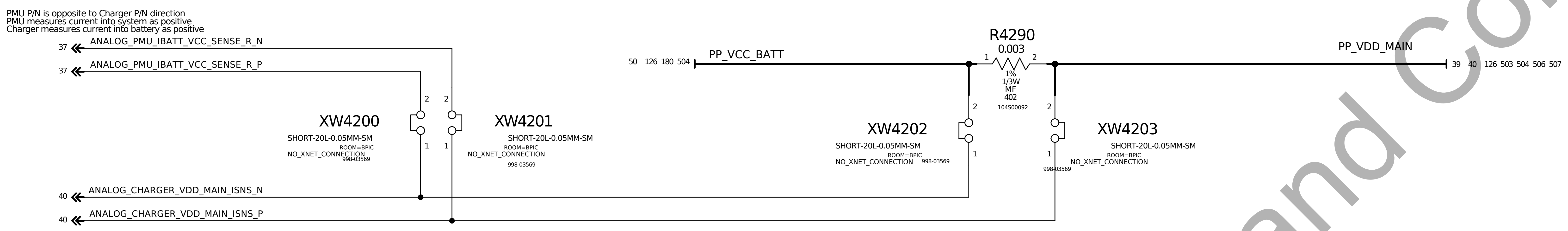
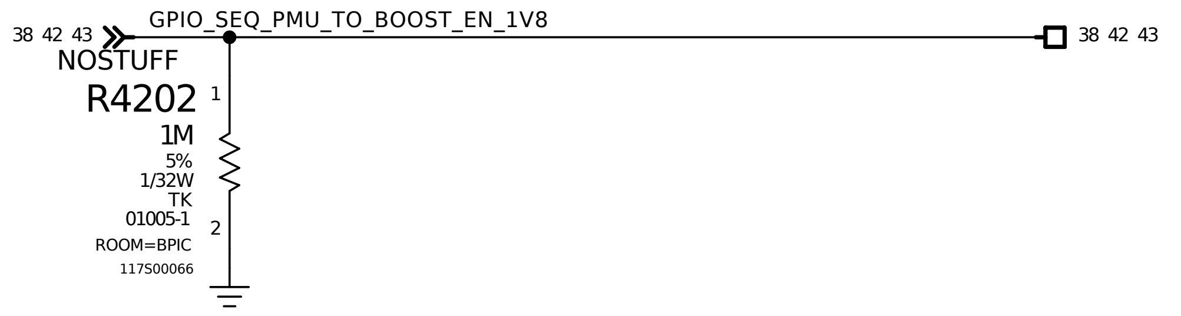
VDD_MAIN Sense Resistor


PMU P/N is opposite to Charger P/N direction
PMU measures current into system as positive
Charger measures current into battery as positive

37
ANALOG_PMU_IBATT_VCC_SENSE_R_N
37
ANALOG_PMU_IBATT_VCC_SENSE_R_P
XW4200
SHORT-20L-0.05MM-SM
ROOM=BPIC
NO_XNET_CONNECTION
998-03569
XW4201
SHORT-20L-0.05MM-SM
ROOM=BPIC
NO_XNET_CONNECTION
998-03569
2
1
40
ANALOG_CHARGER_VDD_MAIN_ISNS_N
40
ANALOG_CHARGER_VDD_MAIN_ISNS_P
50 126 180 504
PP_VCC_BATT
R4290
0.003
1%
1/3W
MF
402
104S00092
XW4202
SHORT-20L-0.05MM-SM
ROOM=BPIC
NO_XNET_CONNECTION
998-03569
XW4203
SHORT-20L-0.05MM-SM
ROOM=BPIC
NO_XNET_CONNECTION
998-03569
PP_VDD_MAIN
39 40 126 503 504 506 507


38 42 43
GPIO_SEQ_PMU_TO_BOOST_EN_1V8
38 42 43
NOSTUFF
R4202
1M
5%
1/32W
TK
01005-1
ROOM=BPIC
117S00066
1
2

PAGE TITLE

SYS PWR: VDD_MAIN Sense Resistor (42)

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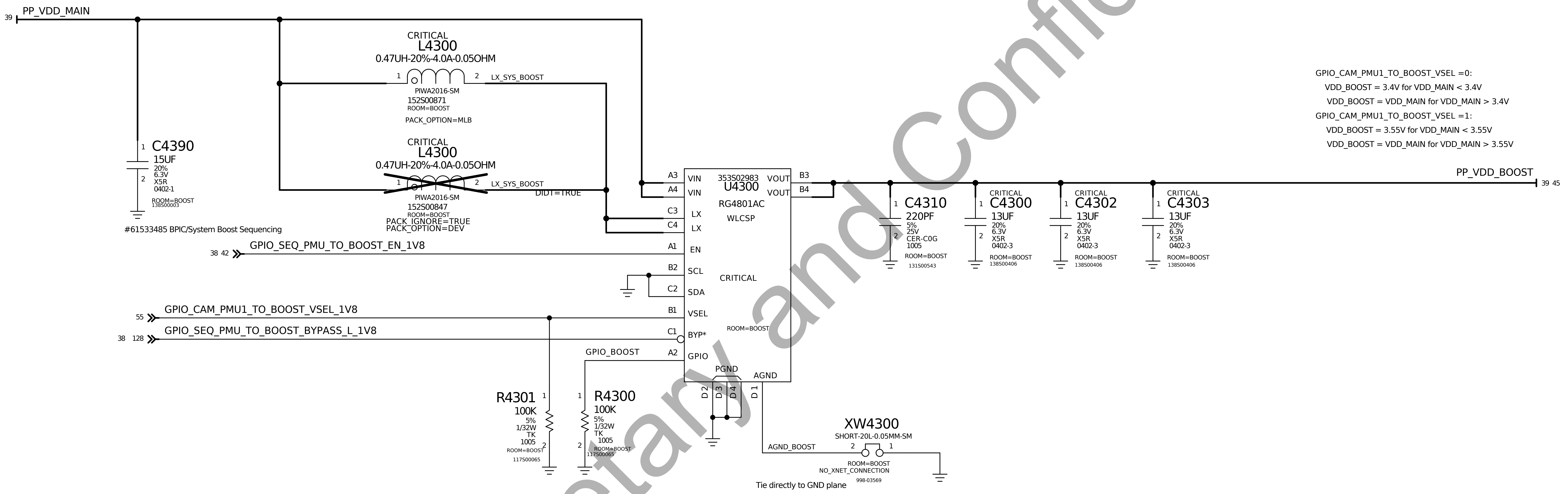
BOOST

SUBSYSTEM SPECIFIC BOM TABLES

Boost

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
353S03002	353S02983	U4300	IC,SN61280H,BOOST,3.4/3.55V,4.5A,CSP16,TI


39 PP_VDD_MAIN
C4390
1
15UF
20%
6.3V
X5R
0402-1
2
ROOM=BOOST
138S00003
#61533485 BPIC/System Boost Sequencing
CRITICAL
L4300
0.47UH-20%-4.0A-0.05OHM
1
2
LX_SYS_BOOST
PIWA2016-SM
152S00871
ROOM=BOOST
PACK_OPTION=MLB
CRITICAL
L4300
0.47UH-20%-4.0A-0.05OHM
1
2
LX_SYS_BOOST
DIDT=TRUE
PIWA2016-SM
152S00847
ROOM=BOOST
PACK_IGNORE=TRUE
PACK_OPTION=DEV
38 42 GPIO_SEQ_PMU_TO_BOOST_EN_1V8
55 GPIO_CAM_PMU1_TO_BOOST_VSEL_1V8
38 128 GPIO_SEQ_PMU_TO_BOOST_BYPASS_L_1V8
GPIO_BOOST
353S02983
U4300
RG4801AC
WLCSP
CRITICAL
ROOM=BOOST
A3 VIN
A4 VIN
C3 LX
C4 LX
A1 EN
B2 SCL
C2 SDA
B1 VSEL
C1 BYP*
A2 GPIO
VOUT B3
VOUT B4
PGND
AGND
D2 D3 D4 D1
R4301
100K
5%
1/32W
TK
1005
ROOM=BOOST
117S00065
R4300
100K
5%
1/32W
TK
1005
ROOM=BOOST
117S00065
XW4300
SHORT-20L-0.05MM-SM
AGND_BOOST
2 1
ROOM=BOOST
NO_XNET_CONNECTION
998-03569
Tie directly to GND plane
C4310
220PF
5%
25V
CER-C0G
1005
ROOM=BOOST
131S00543
CRITICAL
C4300
13UF
20%
6.3V
X5R
0402-3
ROOM=BOOST
138S00406
CRITICAL
C4302
13UF
20%
6.3V
X5R
0402-3
ROOM=BOOST
138S00406
CRITICAL
C4303
13UF
20%
6.3V
X5R
0402-3
ROOM=BOOST
138S00406
PP_VDD_BOOST 39 45
GPIO_CAM_PMU1_TO_BOOST_VSEL =0:
VDD_BOOST = 3.4V for VDD_MAIN < 3.4V
VDD_BOOST = VDD_MAIN for VDD_MAIN > 3.4V
GPIO_CAM_PMU1_TO_BOOST_VSEL =1:
VDD_BOOST = 3.55V for VDD_MAIN < 3.55V
VDD_BOOST = VDD_MAIN for VDD_MAIN > 3.55V

PAGE TITLE
SYS PWR: Boost (43)

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Wireless Charger

PP_VDD_MAIN
PP_WLCHGR_VMID
NET_VOLTAGE=20V
138S00246 C4438 2.2UF 20% 25V X5R 0402-6 ROOM=CHROMITE
C4441 220PF 5% 25V C0G 1005 ROOM=CHROMITE 131S00170
998-1870 XW4402 SHORT-10L-0.1MM-SM ROOM=CHROMITE NO_XNET_CONNECTION
PP_WLCHGR_VRECT_XW
PP_WLCHGR_VRECT
PP1V24_S2
132S0316 C4466 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=CHROMITE
C4440 220PF 5% 25V C0G 1005 ROOM=CHROMITE 131S00170
C4432 2.2UF 20% 25V X5R 0402-6 ROOM=CHROMITE 138S00246
C4433 2.2UF 20% 25V X5R 0402-6 ROOM=CHROMITE 138S00246
C4434 2.2UF 20% 25V X5R 0402-6 ROOM=CHROMITE 138S00246
C4435 2.2UF 20% 25V X5R 0402-6 ROOM=CHROMITE 138S00246
C4436 2.2UF 20% 25V X5R 0402-6 ROOM=CHROMITE 138S00246
PP1V2_WLCHGR_VDD_DIG
138S00412 C4437 0.47UF 20% 6.3V X5R 01005-3 ROOM=CHROMITE
NOSTUFF R4402 0 0% 1/32W TK 1005 ROOM=CHROMITE 117S0067
PP5V0_WLCHGR_ANA VOLTAGE=5.0 V
PP5V0_WLCHGR_ANA_INT VOLTAGE=5.0 V
PP1V2_WLCHGR_ANA VOLTAGE=1.2 V
PP1V2_WLCHGR_INT VOLTAGE=1.2 V
138S00412 C4405 0.47UF 20% 6.3V X5R 01005-3 ROOM=CHROMITE
138S00412 C4465 0.47UF 20% 6.3V X5R 01005-3 ROOM=CHROMITE
138S00071 C4461 4UF 20% 6.3V CER-X5R 201 ROOM=CHROMITE
138S00071 C4464 4UF 20% 6.3V CER-X5R 201 ROOM=CHROMITE
VDD_DIG VDD_DIG VDD_DIG OUTPUT
VRECT VRECT VRECT VRECT VRECT OUTPUT
DVDD DVDD DVDD DVDD INPUT
VSYS_1P2 VSYS_1P8 VSYS_IO VSYS_IO VSYS_ANA INPUT
VMID_ILOAD VMID VMID VMID VMID VMID VMID VMID
VDD_1P2 VDD_ANA VDD_ANA_INT VDD_ANA_1P2 V1P2_INT OUTPUT
343S00697 U4401 STWPCHA1 WLCSP
ROOM=CHROMITE
GND BOOT_HB
132S00010 C4442 0.1UF 10% 35V CER-X5R 201 ROOM=CHROMITE
WLCHGR_BOOT1_5V_XW
WLCHGR_BOOT1_5V BOOT1
NC_WLCHGR_BOOT1_GH BOOT1_GH
NC_WLCHGR_BOOT1_GL BOOT1_GL
998-1870 XW4401 SHORT-10L-0.1MM-SM ROOM=CHROMITE NO_XNET_CONNECTION
132S00314 C4422 33NF 10% 50V CERM 402 ROOM=CHROMITE
WLCHGR_COMM1 COMM11 COMM12
PAC_WLCHGR_COIL1
AC1 AC1
ROOM=CHROMITE 132S00103 C4424 2200PF 10% 50V X5R 201
PAC_WLCHGR_AC2 AC2 AC2
998-1870 XW4404 SHORT-10L-0.1MM-SM NO_XNET_CONNECTION ROOM=CHROMITE
132S00314 C4426 33NF 10% 50V CERM 402 ROOM=CHROMITE
WLCHGR_COMM2 COMM21 COMM22
132S00010 C4444 0.1UF 10% 35V CER-X5R 201 ROOM=CHROMITE
WLCHGR_BOOT2_5V_XW
WLCHGR_BOOT2_5V BOOT2
NC_WLCHGR_BOOT2_GH BOOT2_GH
NC_WLCHGR_BOOT2_GL BOOT2_GL
NC_WLCHGR_ANA0 ANA_IN0
NC_WLCHGR_ANA1 ANA_IN1
NC_WLCHGR_OVP_ON OVP_ON
GND D_P
WLCHGR_WP_DIS_L WP_DIS*
COIL2
132S00186 CRITICAL C4401 0.033UF 10% 100V X6S 402 ROOM=CHROMITE
132S00187 CRITICAL C4402 0.047UF 10% 100V X6S 402 ROOM=CHROMITE
132S00187 CRITICAL C4403 0.047UF 10% 100V X6S 402 ROOM=CHROMITE
132S00187 CRITICAL C4404 0.047UF 10% 100V X6S 402 ROOM=CHROMITE
PAC_WLCHGR_COIL2
118S00251 R4401 100K 1% 1/20W TK 201 ROOM=CHROMITE NOSTUFF
DGND DGND DGND DGND DGND DGND DGND DGND DGND DGND DGND
RGND RGND RGND RGND
AGND AGND AGND
GND_ILOAD MVRGND
VOUT VOUT
PP_VBUS2_WLCHGR
131S00170 C4468 220PF 5% 25V C0G 1005 ROOM=CHROMITE
138S00246 C4463 2.2UF 20% 25V X5R 0402-6 ROOM=CHROMITE
AMUX0 WLCHGR_AMUX0
AMUX1 WLCHGR_AMUX1
SCLK SPMI1_NUB_TO_WLCHGR_CLK
SDATA SPMI1_NUB_BI_WLCHGR_DATA_R
R4400 33.2 1% 1/32W TK 01005-1 ROOM=CHROMITE 118S00261
SPMI1_NUB_BI_WLCHGR_DATA
PP1V2_WLCHGR_VDD_DIG VOLTAGE=1.2 V
R4463 10K 5% 1/32W TK 01005-1 ROOM=CHROMITE 117S00064
SDA I2C_SDA_WLCHGR
SCL I2C_SCL_WLCHGR
RESET* IO_PMU_TO_WLCHGR_RESET_L
EN_SYS GPIO_SEQ_PMU_TO_WLCHGR_EN_SYS
INT IO_WLCHGR_INT
118S00561 R4405 1M 1% 1005 TK 1/32W ROOM=CHROMITE
LDO_BOOT WLCHGR_LDO_BOOT_R
R4404 511 1% 1/32W TK 1005
WLCHGR_LDO_BOOT
132S00010 C4406 0.1UF 10% 35V CER-X5R 201 ROOM=CHROMITE
PP_WLCHGR_VRECT_XW
GPIO0 SWD_NUB_BI_WLCHGR_SWDIO
GPIO1 GPIO_SPARE_WLCHGR_SUPER_PP
GPIO2 GPIO_SPARE_WLCHGR_SUPER_PP
GPIO3 GPIO_SPARE_WLCHGR_SUPER_PP
GPIO4 SWD_NUB_TO_MANY_SWCLK0
GPIO5 GPIO_SPARE_WLCHGR_SUPER_PP
GPIO6 GPIO_SPARE_WLCHGR_SUPER_PP
R4461 100K 117S00065 5% 1/32W TK 1005 ROOM=CHROMITE

PAGE TITLE
SYS PWR: Wireless Charger (44)

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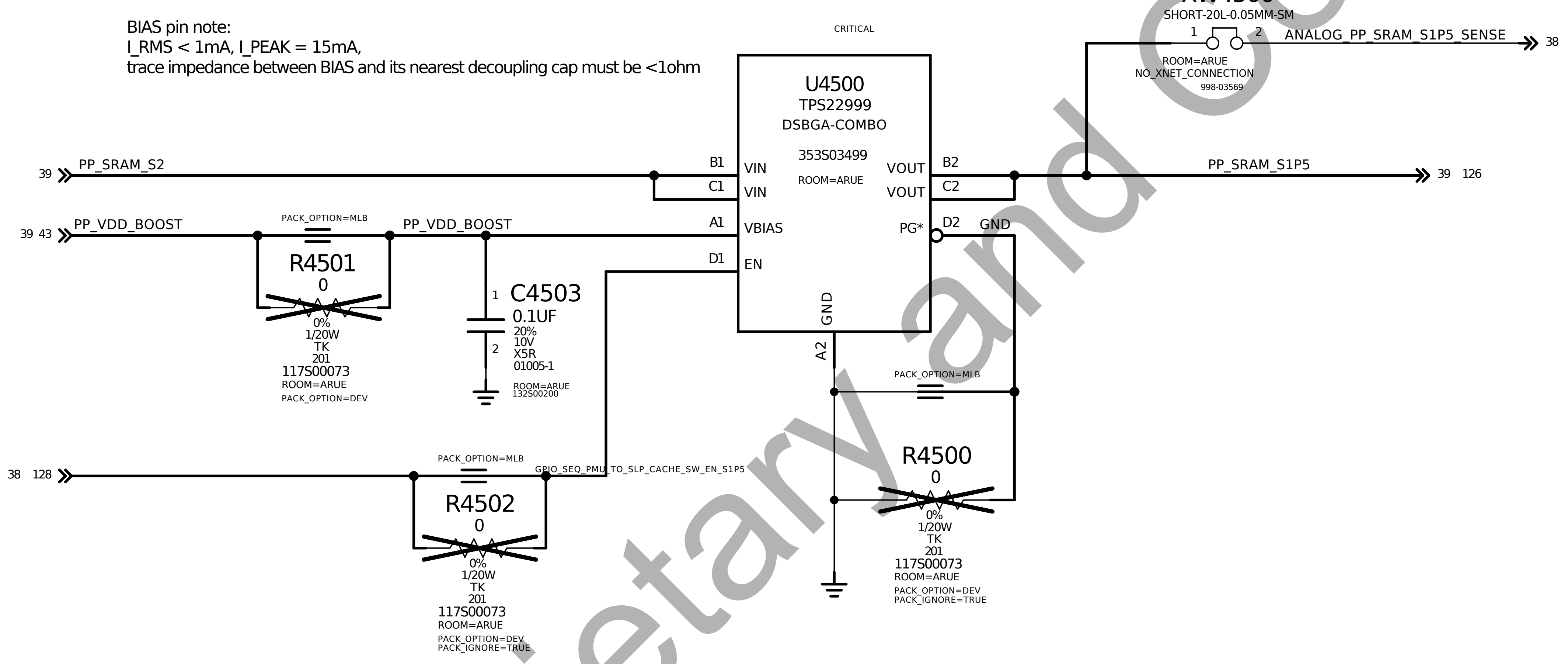
SUBSYSTEM SPECIFIC BOM TABLES

Power Sys

BIAS pin note:
I_RMS < 1mA, I_PEAK = 15mA,
trace impedance between BIAS and its nearest decoupling cap must be <1ohm


CRITICAL
U4500
TPS22999
DSBGA-COMBO
353S03499
ROOM=ARUE
B1 VIN
C1 VIN
A1 VBIAS
D1 EN
VOUT B2
VOUT C2
PG* D2
GND A2
39 PP_SRAM_S2
39 43 PP_VDD_BOOST
PACK_OPTION=MLB
PP_VDD_BOOST
R4501
0
0%
1/20W
TK
201
117S00073
ROOM=ARUE
PACK_OPTION=DEV
C4503
1
2
0.1UF
20%
10V
X5R
01005-1
ROOM=ARUE
132S00200
38 128
PACK_OPTION=MLB
GPIO_SEQ_PMU_TO_SLP_CACHE_SW_EN_S1P5
R4502
0
0%
1/20W
TK
201
117S00073
ROOM=ARUE
PACK_OPTION=DEV
PACK_IGNORE=TRUE
GND
PACK_OPTION=MLB
R4500
0
0%
1/20W
TK
201
117S00073
ROOM=ARUE
PACK_OPTION=DEV
PACK_IGNORE=TRUE
XW4500
SHORT-20L-0.05MM-SM
1
2
ROOM=ARUE
NO_XNET_CONNECTION
998-03569
ANALOG_PP_SRAM_S1P5_SENSE 38
PP_SRAM_S1P5 39 126

PAGE TITLE
SYS PWR:

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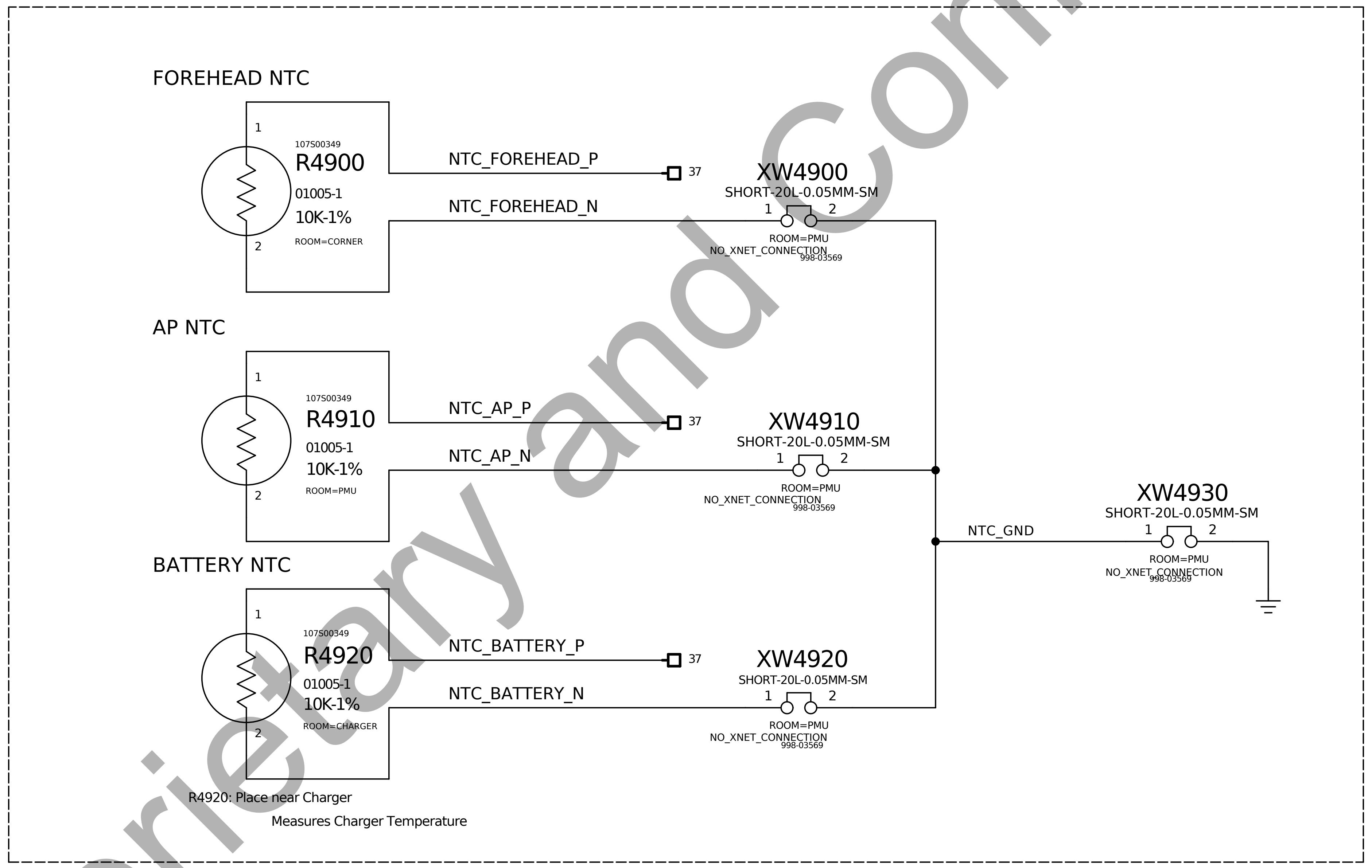
FOREHEAD NTC
1
107S00349
R4900
01005-1
10K-1%
ROOM=CORNER
2
NTC_FOREHEAD_P
37
NTC_FOREHEAD_N
XW4900
SHORT-20L-0.05MM-SM
1
2
ROOM=PMU
NO_XNET_CONNECTION
998-03569
AP NTC
1
107S00349
R4910
01005-1
10K-1%
ROOM=PMU
2
NTC_AP_P
37
NTC_AP_N
XW4910
SHORT-20L-0.05MM-SM
1
2
ROOM=PMU
NO_XNET_CONNECTION
998-03569
NTC_GND
XW4930
SHORT-20L-0.05MM-SM
1
2
ROOM=PMU
NO_XNET_CONNECTION
998-03569
BATTERY NTC
1
107S00349
R4920
01005-1
10K-1%
ROOM=CHARGER
2
NTC_BATTERY_P
37
NTC_BATTERY_N
XW4920
SHORT-20L-0.05MM-SM
1
2
ROOM=PMU
NO_XNET_CONNECTION
998-03569
R4920: Place near Charger
Measures Charger Temperature

PAGE TITLE

SYS PWR: NTCs (Top) (49)

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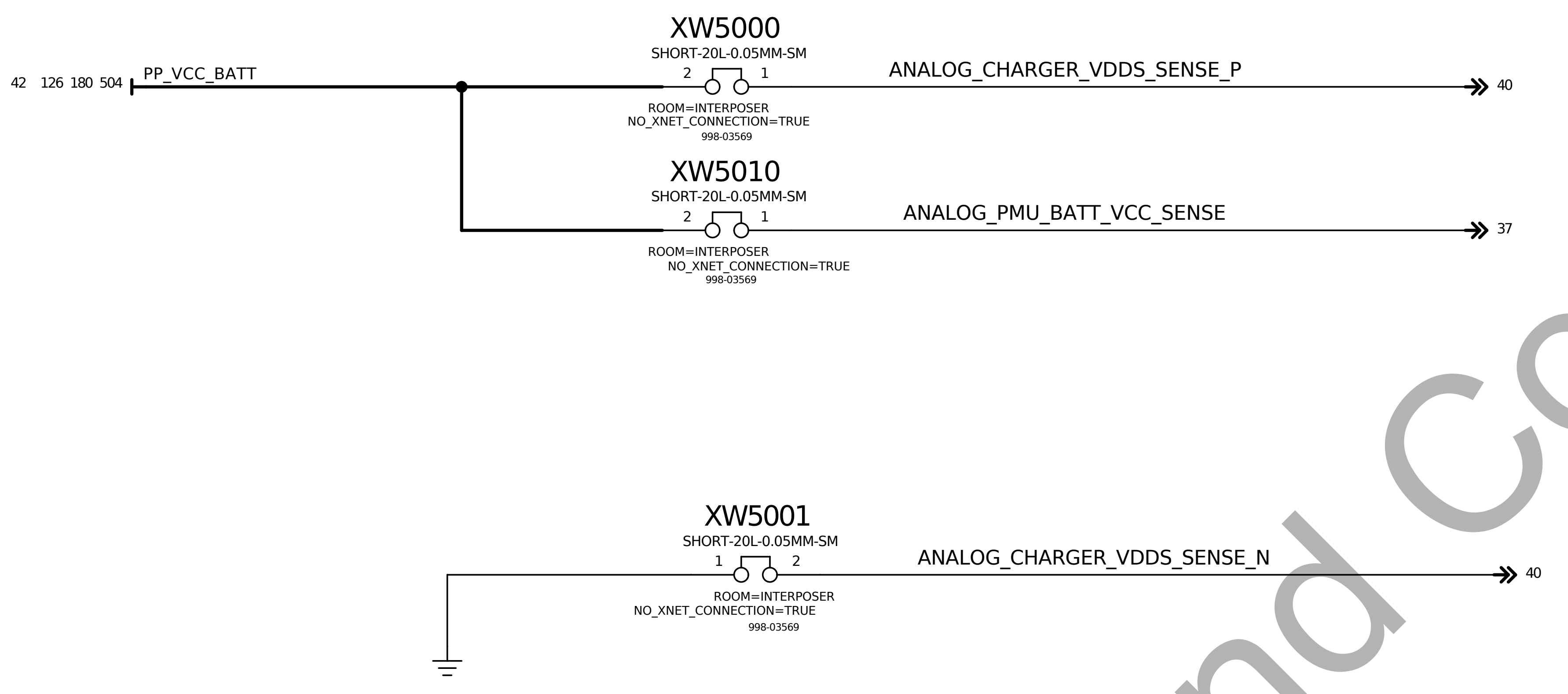
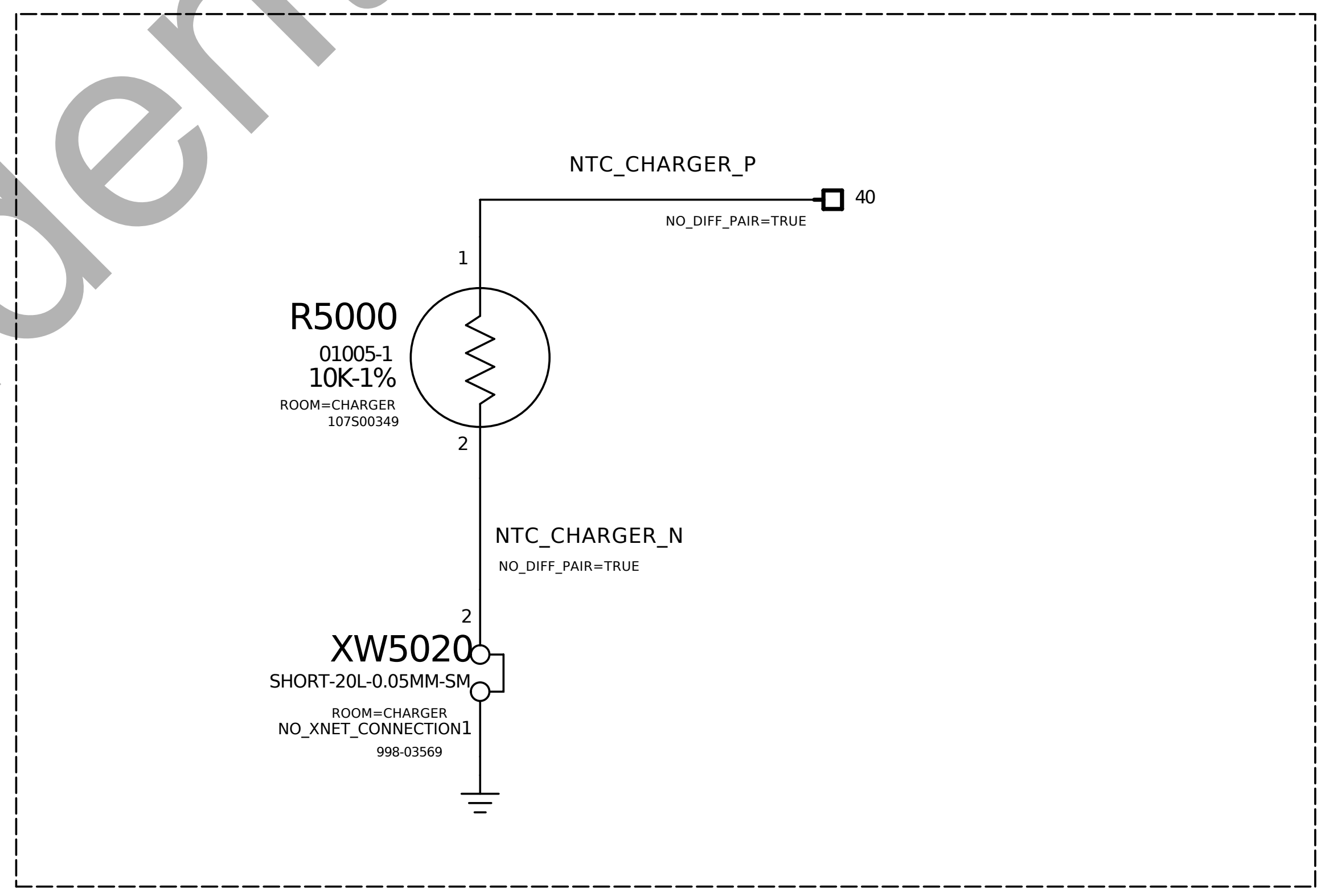
Batt sense lines. Place near PP_VCC_BATT Interposer pins


XW5000
SHORT-20L-0.05MM-SM
42 126 180 504
PP_VCC_BATT
2
1
ANALOG_CHARGER_VDDS_SENSE_P
40
ROOM=INTERPOSER
NO_XNET_CONNECTION=TRUE
998-03569
XW5010
SHORT-20L-0.05MM-SM
2
1
ANALOG_PMU_BATT_VCC_SENSE
37
ROOM=INTERPOSER
NO_XNET_CONNECTION=TRUE
998-03569
XW5001
SHORT-20L-0.05MM-SM
1
2
ANALOG_CHARGER_VDDS_SENSE_N
40
ROOM=INTERPOSER
NO_XNET_CONNECTION=TRUE
998-03569

Rubicon NTC


NTC_CHARGER_P
40
NO_DIFF_PAIR=TRUE
1
R5000
01005-1
10K-1%
ROOM=CHARGER
107S00349
2
NTC_CHARGER_N
NO_DIFF_PAIR=TRUE
2
XW5020
SHORT-20L-0.05MM-SM
ROOM=CHARGER
NO_XNET_CONNECTION1
998-03569

PAGE TITLE
SYS PWR: Charger Sense (50)

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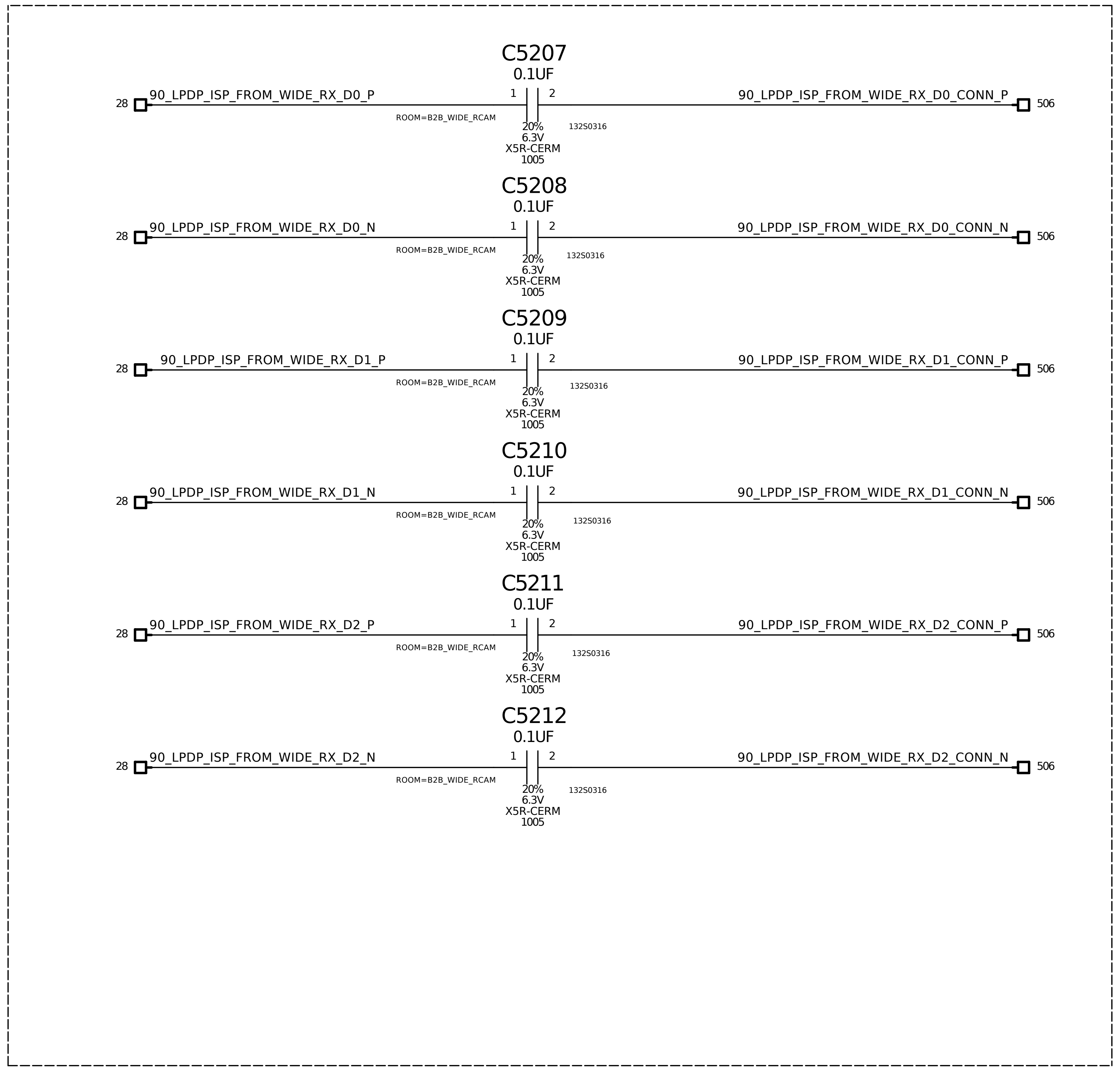
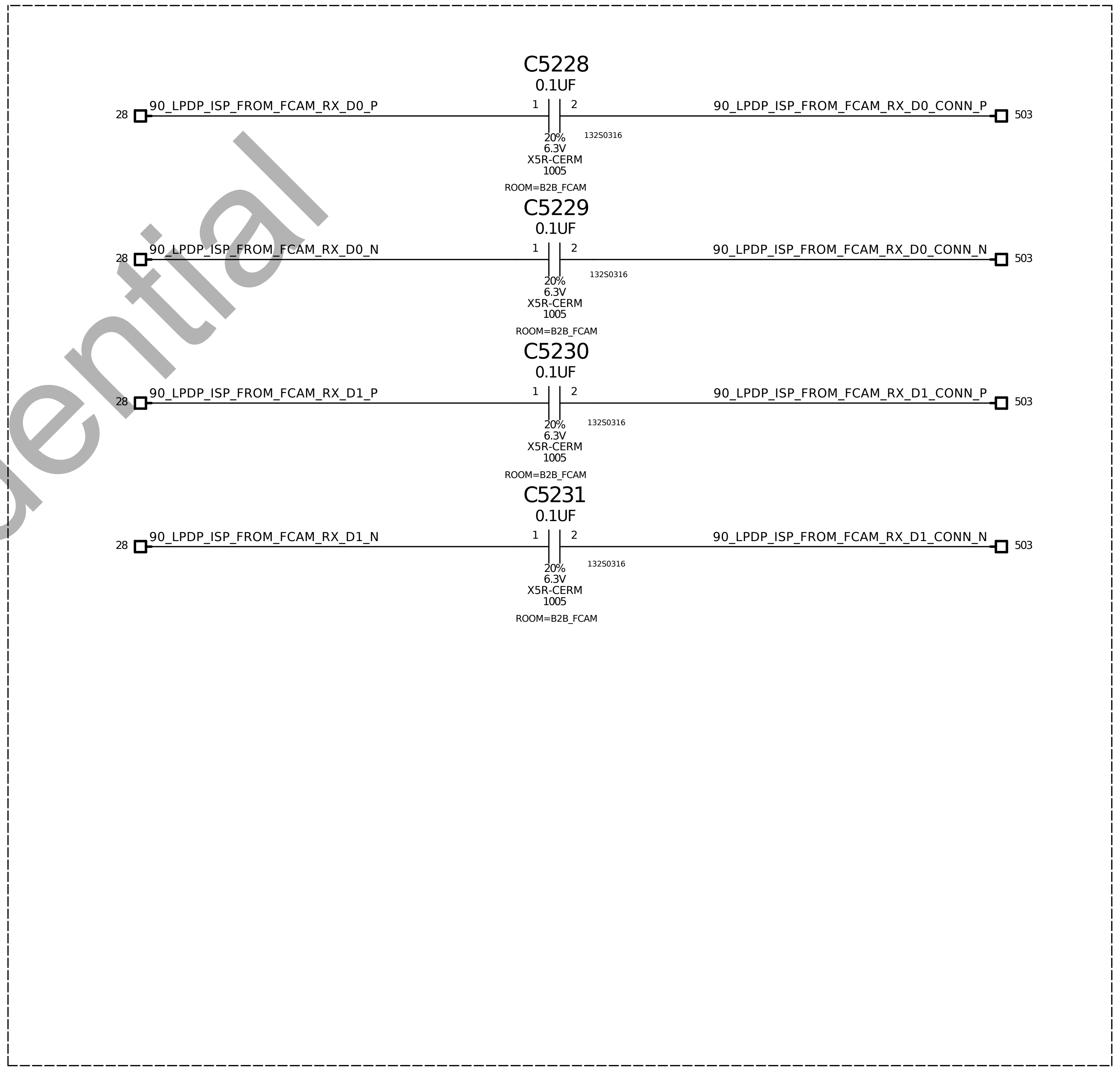
WIDE LPDP FILTERS


C5207
0.1UF
28
90_LPDP_ISP_FROM_WIDE_RX_D0_P
1
2
90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_P
506
ROOM=B2B_WIDE_RCAM
20%
6.3V
X5R-CERM
1005
132S0316
C5208
0.1UF
28
90_LPDP_ISP_FROM_WIDE_RX_D0_N
1
2
90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_N
506
ROOM=B2B_WIDE_RCAM
20%
6.3V
X5R-CERM
1005
132S0316
C5209
0.1UF
28
90_LPDP_ISP_FROM_WIDE_RX_D1_P
1
2
90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_P
506
ROOM=B2B_WIDE_RCAM
20%
6.3V
X5R-CERM
1005
132S0316
C5210
0.1UF
28
90_LPDP_ISP_FROM_WIDE_RX_D1_N
1
2
90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_N
506
ROOM=B2B_WIDE_RCAM
20%
6.3V
X5R-CERM
1005
132S0316
C5211
0.1UF
28
90_LPDP_ISP_FROM_WIDE_RX_D2_P
1
2
90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_P
506
ROOM=B2B_WIDE_RCAM
20%
6.3V
X5R-CERM
1005
132S0316
C5212
0.1UF
28
90_LPDP_ISP_FROM_WIDE_RX_D2_N
1
2
90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_N
506
ROOM=B2B_WIDE_RCAM
20%
6.3V
X5R-CERM
1005
132S0316

FCAM LPDP FILTERS


C5228
0.1UF
28
90_LPDP_ISP_FROM_FCAM_RX_D0_P
1
2
90_LPDP_ISP_FROM_FCAM_RX_D0_CONN_P
503
20%
6.3V
X5R-CERM
1005
132S0316
ROOM=B2B_FCAM
C5229
0.1UF
28
90_LPDP_ISP_FROM_FCAM_RX_D0_N
1
2
90_LPDP_ISP_FROM_FCAM_RX_D0_CONN_N
503
20%
6.3V
X5R-CERM
1005
132S0316
ROOM=B2B_FCAM
C5230
0.1UF
28
90_LPDP_ISP_FROM_FCAM_RX_D1_P
1
2
90_LPDP_ISP_FROM_FCAM_RX_D1_CONN_P
503
20%
6.3V
X5R-CERM
1005
132S0316
ROOM=B2B_FCAM
C5231
0.1UF
28
90_LPDP_ISP_FROM_FCAM_RX_D1_N
1
2
90_LPDP_ISP_FROM_FCAM_RX_D1_CONN_N
503
20%
6.3V
X5R-CERM
1005
132S0316
ROOM=B2B_FCAM

PAGE TITLE
CAMERA: LPDP AC FILTERS (52)

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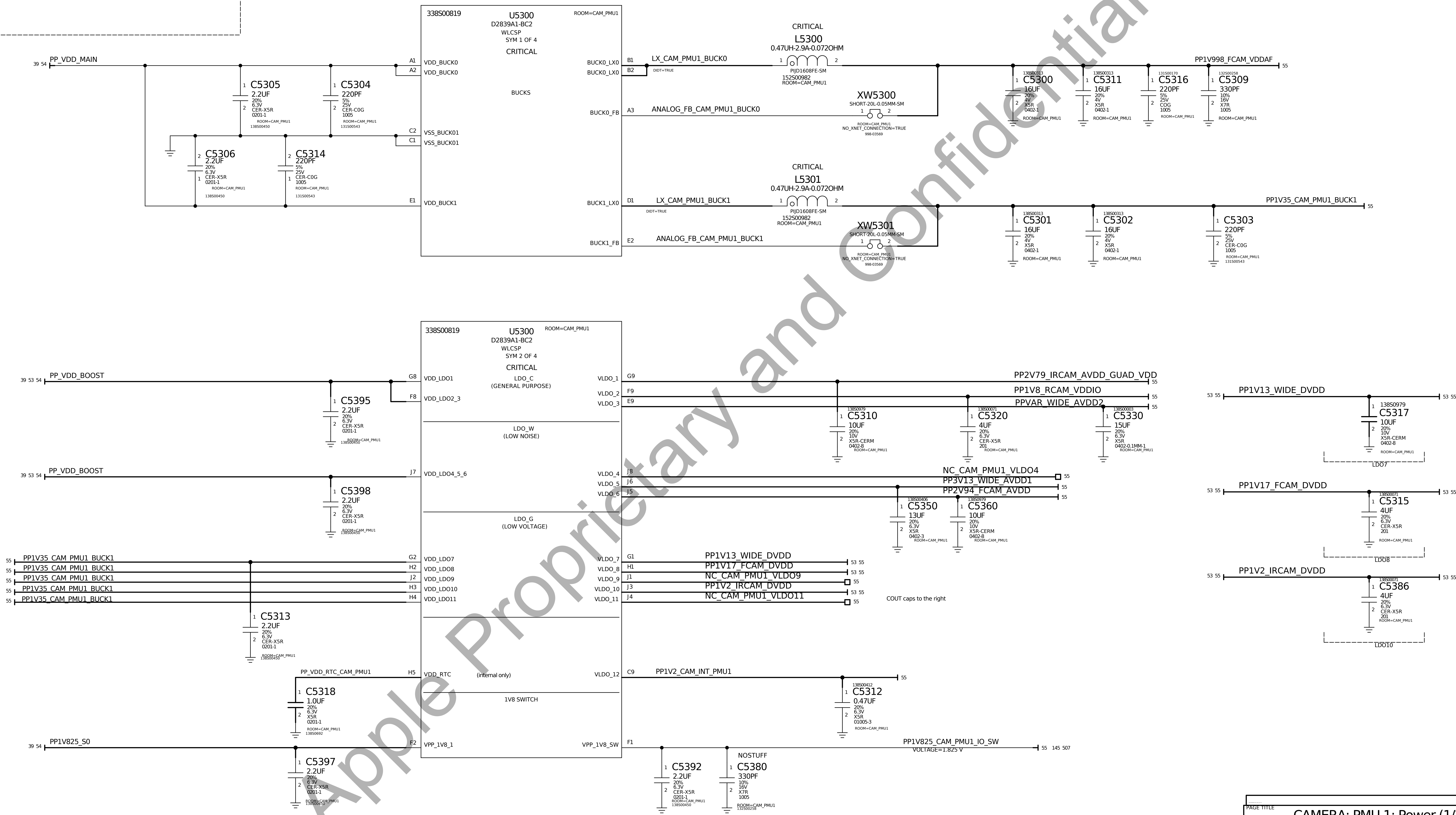
CAMERA PMU1

SUBSYSTEM SPECIFIC BOM TABLES

4uF 0201 Capacitors (single-source Murata)

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S00116	138S00071	(C5315,C5386)	0201,4uF,X5R,6.3V,Taiyo
138S00117	138S00071	(C5315,C5386)	0201,4uF,X5R,6.3V,Kyocera
138S00515	138S00071	(C5315,C5386)	CAP,X5R,4UF,0201,0.55MM,SEMCO



338S00819
U5300
D2839A1-BC2
WLCSP
SYM 1 OF 4
CRITICAL
ROOM=CAM_PMU1
BUCKS
PP_VDD_MAIN
VDD_BUCK0
VSS_BUCK01
VDD_BUCK1
BUCK0_LX0
BUCK0_FB
BUCK1_LX0
BUCK1_FB
C5305 2.2UF 20% 6.3V CER-X5R 0201-1
C5304 220PF 5% 25V CER-C0G 1005
C5306 2.2UF 20% 6.3V CER-X5R 0201-1
C5314 220PF 5% 25V CER-C0G 1005
LX_CAM_PMU1_BUCK0
ANALOG_FB_CAM_PMU1_BUCK0
LX_CAM_PMU1_BUCK1
ANALOG_FB_CAM_PMU1_BUCK1
CRITICAL
L5300
0.47UH-2.9A-0.072OHM
PIJD1608FE-SM
152S00982
L5301
0.47UH-2.9A-0.072OHM
XW5300
XW5301
SHORT-20L-0.05MM-SM
NO_XNET_CONNECTION=TRUE
998-03569
PP1V998_FCAM_VDDAF
C5300 16UF 20% 4V X5R 0402-1
C5311 16UF 20% 4V X5R 0402-1
C5316 220PF 5% 25V C0G 1005
C5309 330PF 10% 16V X7R 1005
PP1V35_CAM_PMU1_BUCK1
C5301 16UF 20% 4V X5R 0402-1
C5302 16UF 20% 4V X5R 0402-1
C5303 220PF 5% 25V CER-C0G 1005
U5300
SYM 2 OF 4
LDO_C (GENERAL PURPOSE)
LDO_W (LOW NOISE)
LDO_G (LOW VOLTAGE)
1V8 SWITCH
PP_VDD_BOOST
VDD_LDO1
VDD_LDO2_3
VDD_LDO4_5_6
VDD_LDO7
VDD_LDO8
VDD_LDO9
VDD_LDO10
VDD_LDO11
VDD_RTC
VPP_1V8_1
(internal only)
VLDO_1
VLDO_2
VLDO_3
VLDO_4
VLDO_5
VLDO_6
VLDO_7
VLDO_8
VLDO_9
VLDO_10
VLDO_11
VLDO_12
VPP_1V8_SW
C5395 2.2UF 20% 6.3V CER-X5R 0201-1
C5398 2.2UF 20% 6.3V CER-X5R 0201-1
C5313 2.2UF 20% 6.3V CER-X5R 0201-1
PP2V79_IRCAM_AVDD_GUAD_VDD
PP1V8_RCAM_VDDIO
PPVAR_WIDE_AVDD2
C5310 10UF 20% 10V X5R-CERM 0402-8
C5320 4UF 20% 6.3V CER-X5R 201
C5330 15UF 20% 6.3V X5R 0402-0.1MM-1
NC_CAM_PMU1_VLDO4
PP3V13_WIDE_AVDD1
PP2V94_FCAM_AVDD
C5350 13UF 20% 6.3V X5R 0402-3
C5360 10UF 20% 10V X5R-CERM 0402-8
PP1V35_CAM_PMU1_BUCK1
PP1V13_WIDE_DVDD
PP1V17_FCAM_DVDD
NC_CAM_PMU1_VLDO9
PP1V2_IRCAM_DVDD
NC_CAM_PMU1_VLDO11
COUT caps to the right
C5317 10UF 20% 10V X5R-CERM 0402-8
LDO7
C5315 4UF 20% 6.3V CER-X5R 201
LDO8
C5386 4UF 20% 6.3V CER-X5R 201
LDO10
PP_VDD_RTC_CAM_PMU1
C5318 1.0UF 20% 6.3V X5R 0201-1
PP1V2_CAM_INT_PMU1
C5312 0.47UF 20% 6.3V X5R 01005-3
PP1V825_S0
C5397 2.2UF 20% 6.3V CER-X5R 0201-1
PP1V825_CAM_PMU1_IO_SW
VOLTAGE=1.825 V
C5392 2.2UF 20% 6.3V CER-X5R 0201-1
NOSTUFF
C5380 330PF 10% 16V X7R 1005

PAGE TITLE

CAMERA: PMU 1: Power (1/2) (53)

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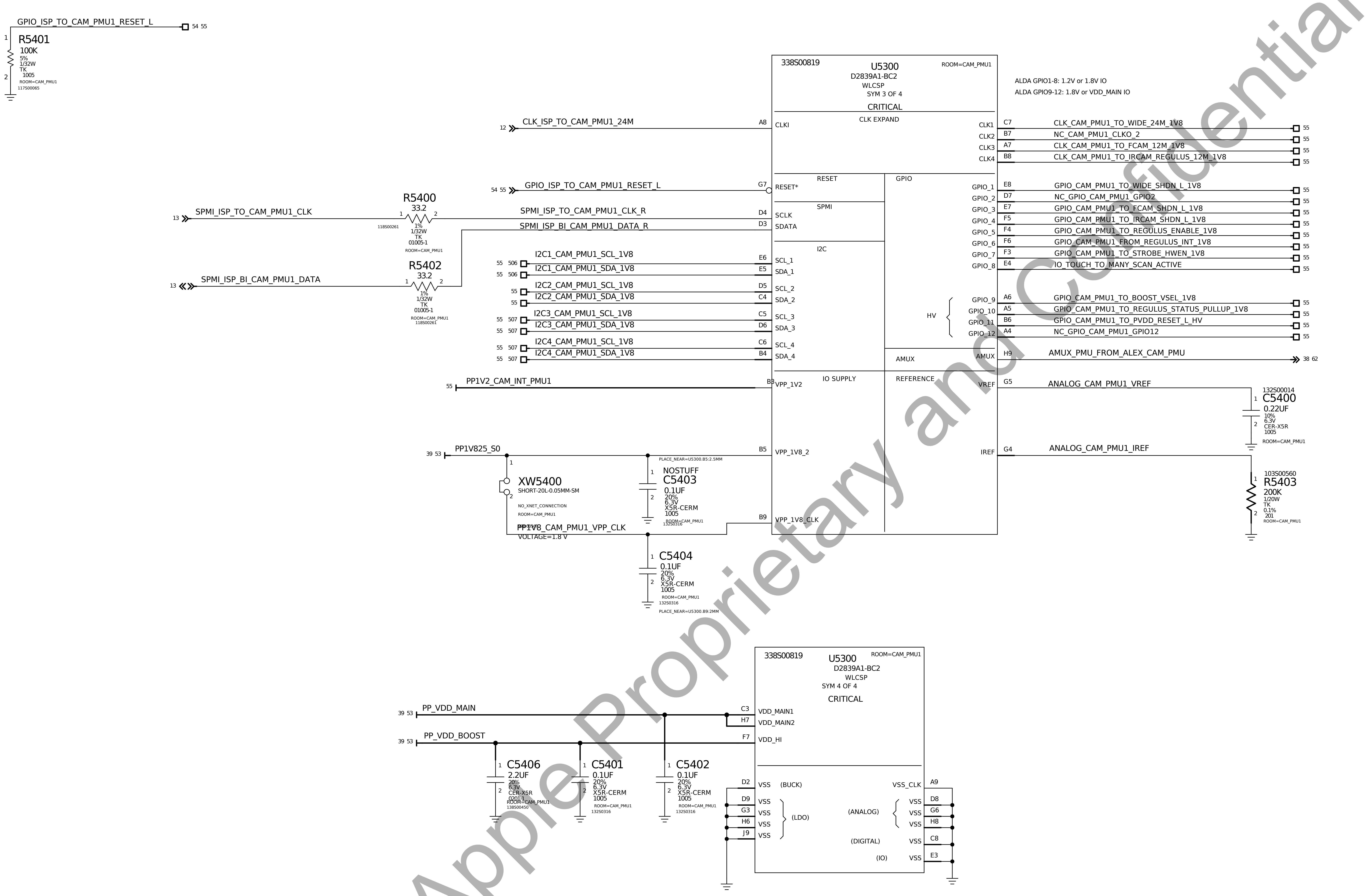
CAMERA PMU1



GPIO_ISP_TO_CAM_PMU1_RESET_L
54 55
R5401
100K
5%
1/32W
TK
1005
ROOM=CAM_PMU1
117S00065
12
CLK_ISP_TO_CAM_PMU1_24M
54 55
GPIO_ISP_TO_CAM_PMU1_RESET_L
13
SPMI_ISP_TO_CAM_PMU1_CLK
R5400
33.2
118S00261
1%
1/32W
TK
01005-1
ROOM=CAM_PMU1
SPMI_ISP_TO_CAM_PMU1_CLK_R
SPMI_ISP_BI_CAM_PMU1_DATA_R
13
SPMI_ISP_BI_CAM_PMU1_DATA
R5402
33.2
1%
1/32W
TK
01005-1
ROOM=CAM_PMU1
118S00261
55 506 I2C1_CAM_PMU1_SCL_1V8
55 506 I2C1_CAM_PMU1_SDA_1V8
55 I2C2_CAM_PMU1_SCL_1V8
55 I2C2_CAM_PMU1_SDA_1V8
55 507 I2C3_CAM_PMU1_SCL_1V8
55 507 I2C3_CAM_PMU1_SDA_1V8
55 507 I2C4_CAM_PMU1_SCL_1V8
55 507 I2C4_CAM_PMU1_SDA_1V8
55 PP1V2_CAM_INT_PMU1
39 53 PP1V825_S0
XW5400
SHORT-20L-0.05MM-SM
NO_XNET_CONNECTION
ROOM=CAM_PMU1
PP1V8_CAM_PMU1_VPP_CLK
VOLTAGE=1.8 V
PLACE_NEAR=U5300.B5:2.5MM
NOSTUFF
C5403
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=CAM_PMU1
132S0316
C5404
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=CAM_PMU1
132S0316
PLACE_NEAR=U5300.B9:2MM
338S00819
U5300
ROOM=CAM_PMU1
D2839A1-BC2
WLCSP
SYM 3 OF 4
CRITICAL
CLK EXPAND
A8 CLKI
RESET
G7 RESET*
SPMI
D4 SCLK
D3 SDATA
I2C
E6 SCL_1
E5 SDA_1
D5 SCL_2
C4 SDA_2
C5 SCL_3
D6 SDA_3
C6 SCL_4
B4 SDA_4
IO SUPPLY
B3 VPP_1V2
B5 VPP_1V8_2
B9 VPP_1V8_CLK
GPIO
HV
AMUX
REFERENCE
ALDA GPIO1-8: 1.2V or 1.8V IO
ALDA GPIO9-12: 1.8V or VDD_MAIN IO
CLK1 C7 CLK_CAM_PMU1_TO_WIDE_24M_1V8 55
CLK2 B7 NC_CAM_PMU1_CLKO_2 55
CLK3 A7 CLK_CAM_PMU1_TO_FCAM_12M_1V8 55
CLK4 B8 CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8 55
GPIO_1 E8 GPIO_CAM_PMU1_TO_WIDE_SHDN_L_1V8 55
GPIO_2 D7 NC_GPIO_CAM_PMU1_GPIO2 55
GPIO_3 E7 GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8 55
GPIO_4 F5 GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8 55
GPIO_5 F4 GPIO_CAM_PMU1_TO_REGULUS_ENABLE_1V8 55
GPIO_6 F6 GPIO_CAM_PMU1_FROM_REGULUS_INT_1V8 55
GPIO_7 F3 GPIO_CAM_PMU1_TO_STROBE_HWEN_1V8 55
GPIO_8 E4 IO_TOUCH_TO_MANY_SCAN_ACTIVE 55
GPIO_9 A6 GPIO_CAM_PMU1_TO_BOOST_VSEL_1V8 55
GPIO_10 A5 GPIO_CAM_PMU1_TO_REGULUS_STATUS_PULLUP_1V8 55
GPIO_11 B6 GPIO_CAM_PMU1_TO_PVDD_RESET_L_HV 55
GPIO_12 A4 NC_GPIO_CAM_PMU1_GPIO12 55
AMUX H9 AMUX_PMU_FROM_ALEX_CAM_PMU 38 62
VREF G5 ANALOG_CAM_PMU1_VREF
IREF G4 ANALOG_CAM_PMU1_IREF
132S00014
C5400
0.22UF
10%
6.3V
CER-X5R
1005
ROOM=CAM_PMU1
103S00560
R5403
200K
1/20W
TK
0.1%
201
ROOM=CAM_PMU1
338S00819
U5300
ROOM=CAM_PMU1
D2839A1-BC2
WLCSP
SYM 4 OF 4
CRITICAL
39 53 PP_VDD_MAIN
39 53 PP_VDD_BOOST
C3 VDD_MAIN1
H7 VDD_MAIN2
F7 VDD_HI
C5406
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=CAM_PMU1
138S00450
C5401
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=CAM_PMU1
132S0316
C5402
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=CAM_PMU1
132S0316
D2 VSS (BUCK)
D9 VSS
G3 VSS
H6 VSS
J9 VSS
(LDO)
VSS_CLK A9
(ANALOG)
VSS D8
VSS G6
VSS H8
(DIGITAL) VSS C8
(IO) VSS E3

PAGE TITLE

CAMERA: PMU 1: I/O (2/2) (54)

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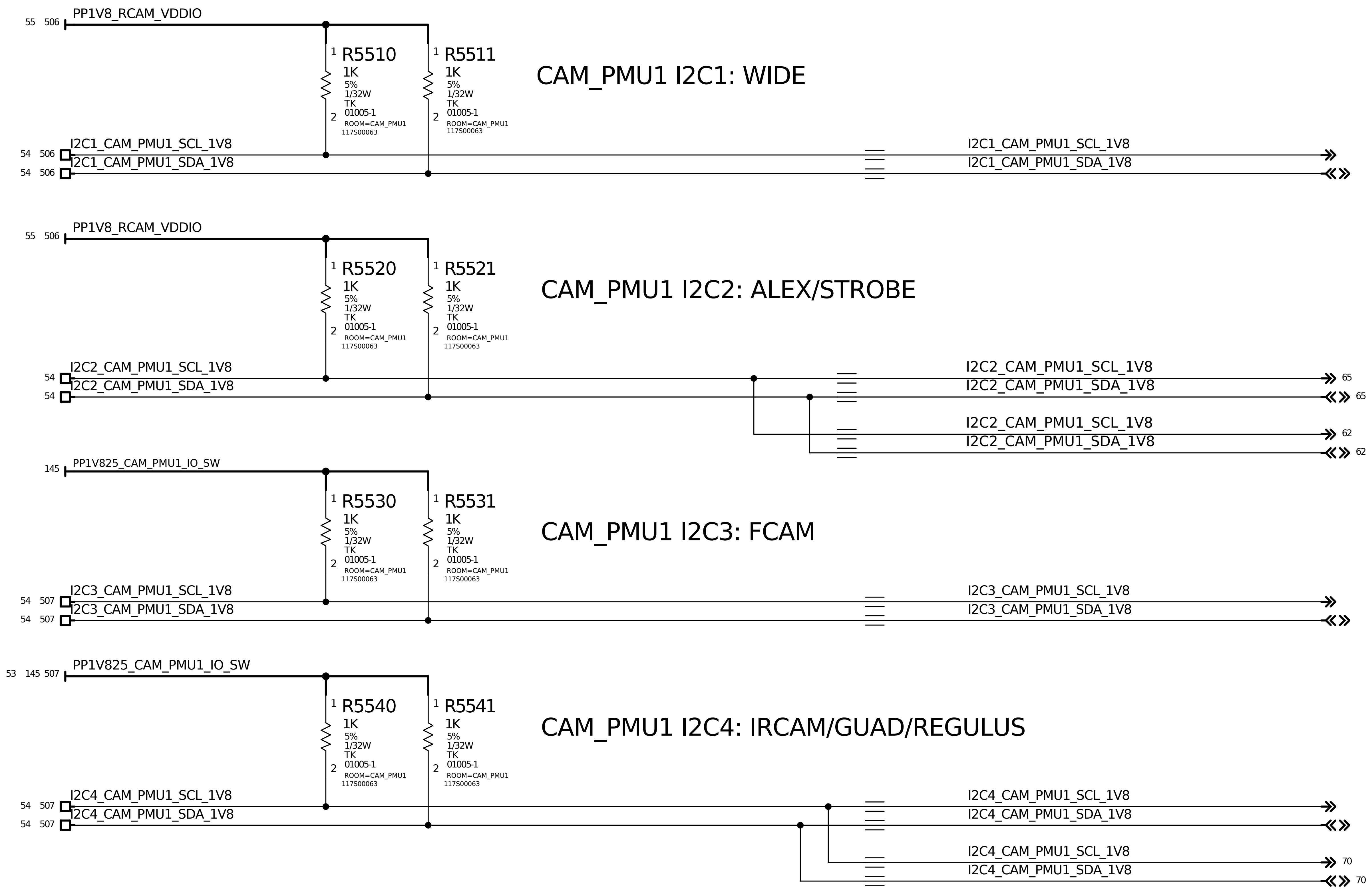
CAMERA PMU1


55 506 PP1V8_RCAM_VDDIO
R5510 1K 5% 1/32W TK 01005-1 ROOM=CAM_PMU1 117S00063
R5511 1K 5% 1/32W TK 01005-1 ROOM=CAM_PMU1 117S00063
CAM_PMU1 I2C1: WIDE
54 506 I2C1_CAM_PMU1_SCL_1V8
54 506 I2C1_CAM_PMU1_SDA_1V8
I2C1_CAM_PMU1_SCL_1V8
I2C1_CAM_PMU1_SDA_1V8
55 506 PP1V8_RCAM_VDDIO
R5520 1K 5% 1/32W TK 01005-1 ROOM=CAM_PMU1 117S00063
R5521 1K 5% 1/32W TK 01005-1 ROOM=CAM_PMU1 117S00063
CAM_PMU1 I2C2: ALEX/STROBE
54 I2C2_CAM_PMU1_SCL_1V8
54 I2C2_CAM_PMU1_SDA_1V8
I2C2_CAM_PMU1_SCL_1V8 65
I2C2_CAM_PMU1_SDA_1V8 65
I2C2_CAM_PMU1_SCL_1V8 62
I2C2_CAM_PMU1_SDA_1V8 62
145 PP1V825_CAM_PMU1_IO_SW
R5530 1K 5% 1/32W TK 01005-1 ROOM=CAM_PMU1 117S00063
R5531 1K 5% 1/32W TK 01005-1 ROOM=CAM_PMU1 117S00063
CAM_PMU1 I2C3: FCAM
54 507 I2C3_CAM_PMU1_SCL_1V8
54 507 I2C3_CAM_PMU1_SDA_1V8
I2C3_CAM_PMU1_SCL_1V8
I2C3_CAM_PMU1_SDA_1V8
53 145 507 PP1V825_CAM_PMU1_IO_SW
R5540 1K 5% 1/32W TK 01005-1 ROOM=CAM_PMU1 117S00063
R5541 1K 5% 1/32W TK 01005-1 ROOM=CAM_PMU1 117S00063
CAM_PMU1 I2C4: IRCAM/GUAD/REGULUS
54 507 I2C4_CAM_PMU1_SCL_1V8
54 507 I2C4_CAM_PMU1_SDA_1V8
I2C4_CAM_PMU1_SCL_1V8
I2C4_CAM_PMU1_SDA_1V8
I2C4_CAM_PMU1_SCL_1V8 70
I2C4_CAM_PMU1_SDA_1V8 70

DOMAIN	CAM PMU1	NUMBER	I2C1	DIAGS NUMBER	4	SPEED	1MHz
DEVICE	VOLTAGE	7-BIT ADDR	8-BIT ADDR	MAX SPEED	LOCATION		
Wide	1.8V	0x10	0x20,0x21	1MHz	RCAM MW FLEX		
Lorentz	1.8V	0x74	0xE8,0xE9	1MHz	RCAM MW FLEX		

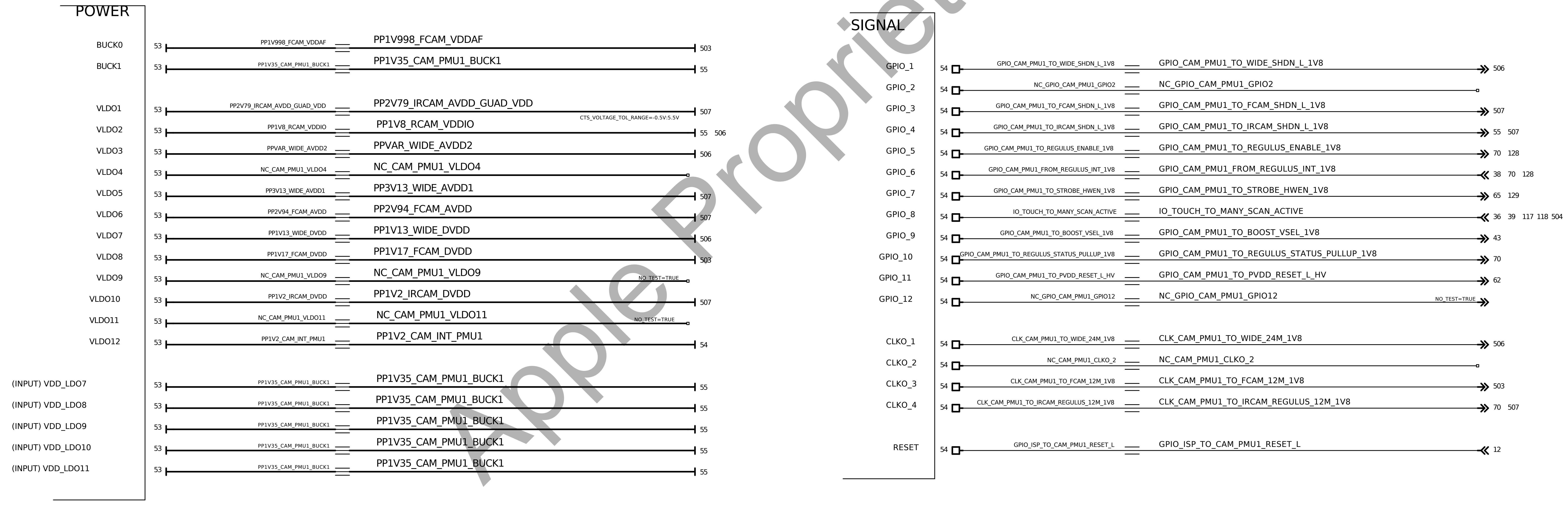
Lorentz can use addresses 0x74,0x75,0x76,0x77 for different modes

DOMAIN	CAM PMU1	NUMBER	I2C2	DIAGS NUMBER	5	SPEED	1MHz
DEVICE	VOLTAGE	7-BIT ADDR	8-BIT ADDR	MAX SPEED	LOCATION		
Yeti	1.8V	0x65	0xCA,0xCB	1MHz	CG MLB		
Alex	1.8V	0x76	0xEC,0xED	1MHz	CG MLB		

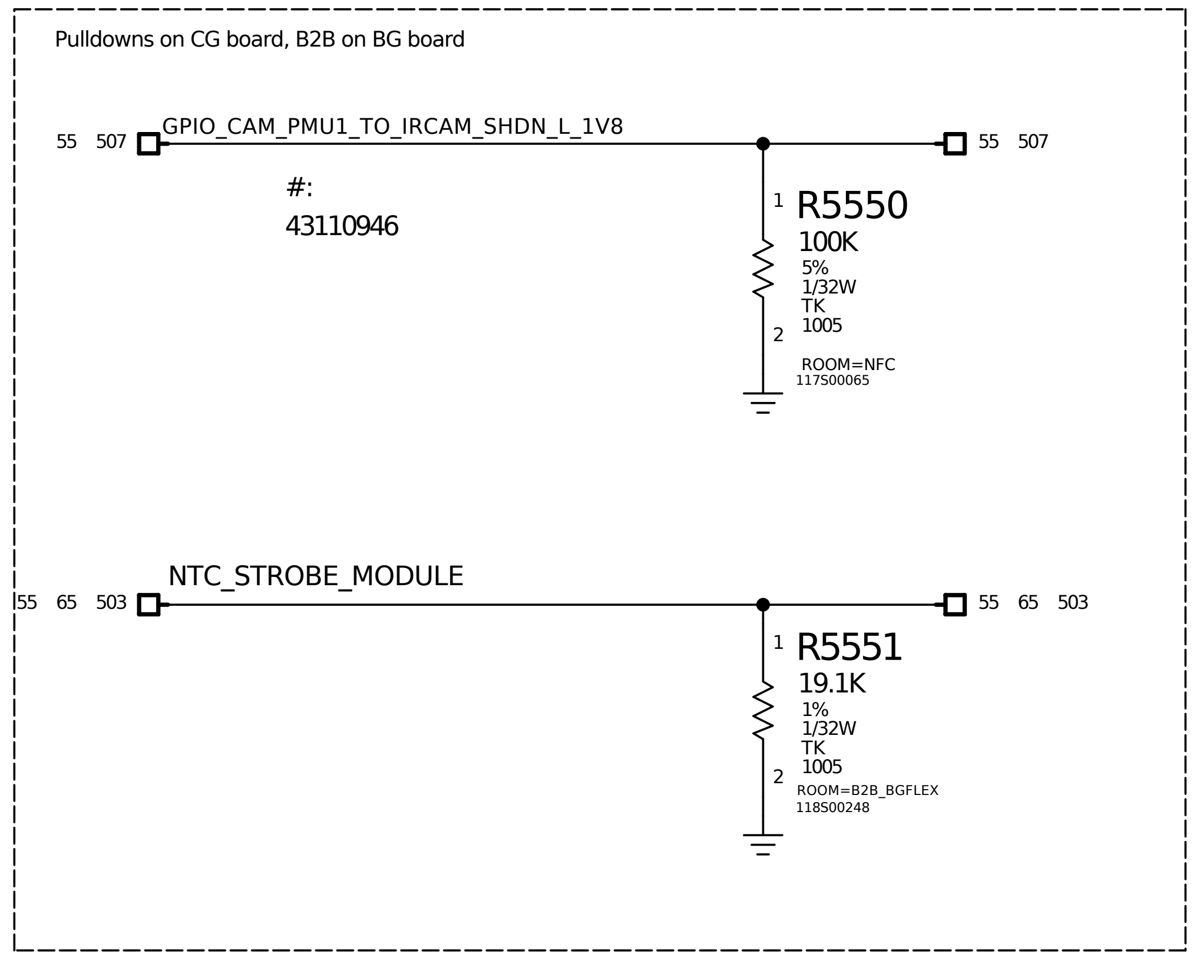
DOMAIN	CAM PMU1	NUMBER	I2C3	DIAGS NUMBER	6	SPEED	1MHz
DEVICE	VOLTAGE	7-BIT ADDR	8-BIT ADDR	MAX SPEED	LOCATION		
FCAM	1.8V	0x10	0x20,0x21	1MHz	FCAM SC FLEX		
Faraday	1.8V	0x59	0xB2,0xB3	1MHz	FCAM SC FLEX		

DOMAIN	CAM PMU1	NUMBER	I2C4	DIAGS NUMBER	7	SPEED	1MHz
DEVICE	VOLTAGE	7-BIT ADDR	8-BIT ADDR	MAX SPEED	LOCATION		
IRCAM	1.8V	0x18	0x30,0x31	1MHz	Banff Flex		
Guadalupe	1.8V	0x64	0xC8,0xC9	1MHz	Banff Flex		
Regulus	1.8V	0x71	0xE2,0xE3	1MHz	CG MLB		

Guadalupe 7 bit addr alternatives are 0x45,0x69,0x35


POWER
BUCK0 53 PP1V998_FCAM_VDDAF 503
BUCK1 53 PP1V35_CAM_PMU1_BUCK1 55
VLDO1 53 PP2V79_IRCAM_AVDD_GUAD_VDD 507
CTS_VOLTAGE_TOL_RANGE=-0.5V:5.5V
VLDO2 53 PP1V8_RCAM_VDDIO 55 506
VLDO3 53 PPVAR_WIDE_AVDD2 506
VLDO4 53 NC_CAM_PMU1_VLDO4
VLDO5 53 PP3V13_WIDE_AVDD1 507
VLDO6 53 PP2V94_FCAM_AVDD 507
VLDO7 53 PP1V13_WIDE_DVDD 506
VLDO8 53 PP1V17_FCAM_DVDD 503
VLDO9 53 NC_CAM_PMU1_VLDO9 NO_TEST=TRUE
VLDO10 53 PP1V2_IRCAM_DVDD 507
VLDO11 53 NC_CAM_PMU1_VLDO11 NO_TEST=TRUE
VLDO12 53 PP1V2_CAM_INT_PMU1 54
(INPUT) VDD_LDO7 53 PP1V35_CAM_PMU1_BUCK1 55
(INPUT) VDD_LDO8 53 PP1V35_CAM_PMU1_BUCK1 55
(INPUT) VDD_LDO9 53 PP1V35_CAM_PMU1_BUCK1 55
(INPUT) VDD_LDO10 53 PP1V35_CAM_PMU1_BUCK1 55
(INPUT) VDD_LDO11 53 PP1V35_CAM_PMU1_BUCK1 55
SIGNAL
GPIO_1 54 GPIO_CAM_PMU1_TO_WIDE_SHDN_L_1V8 506
GPIO_2 54 NC_GPIO_CAM_PMU1_GPIO2
GPIO_3 54 GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8 507
GPIO_4 54 GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8 55 507
GPIO_5 54 GPIO_CAM_PMU1_TO_REGULUS_ENABLE_1V8 70 128
GPIO_6 54 GPIO_CAM_PMU1_FROM_REGULUS_INT_1V8 38 70 128
GPIO_7 54 GPIO_CAM_PMU1_TO_STROBE_HWEN_1V8 65 129
GPIO_8 54 IO_TOUCH_TO_MANY_SCAN_ACTIVE 36 39 117 118 504
GPIO_9 54 GPIO_CAM_PMU1_TO_BOOST_VSEL_1V8 43
GPIO_10 54 GPIO_CAM_PMU1_TO_REGULUS_STATUS_PULLUP_1V8 70
GPIO_11 54 GPIO_CAM_PMU1_TO_PVDD_RESET_L_HV 62
GPIO_12 54 NC_GPIO_CAM_PMU1_GPIO12 NO_TEST=TRUE
CLKO_1 54 CLK_CAM_PMU1_TO_WIDE_24M_1V8 506
CLKO_2 54 NC_CAM_PMU1_CLKO_2
CLKO_3 54 CLK_CAM_PMU1_TO_FCAM_12M_1V8 503
CLKO_4 54 CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8 70 507
RESET 54 GPIO_ISP_TO_CAM_PMU1_RESET_L 12

Pulldowns on CG board, B2B on BG board


55 507 GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8 55 507
#:
43110946
R5550 100K 5% 1/32W TK 1005 ROOM=NFC 117S00065
55 65 503 NTC_STROBE_MODULE 55 65 503
R5551 19.1K 1% 1/32W TK 1005 ROOM=B2B_BGFLEX 118S00248

SYNC_MASTER=d37_mlb_cg_9.1.0 SYNC_DATE=03/21/2023

PAGE TITLE

CAMERA: PMU 1: Aliases (55)

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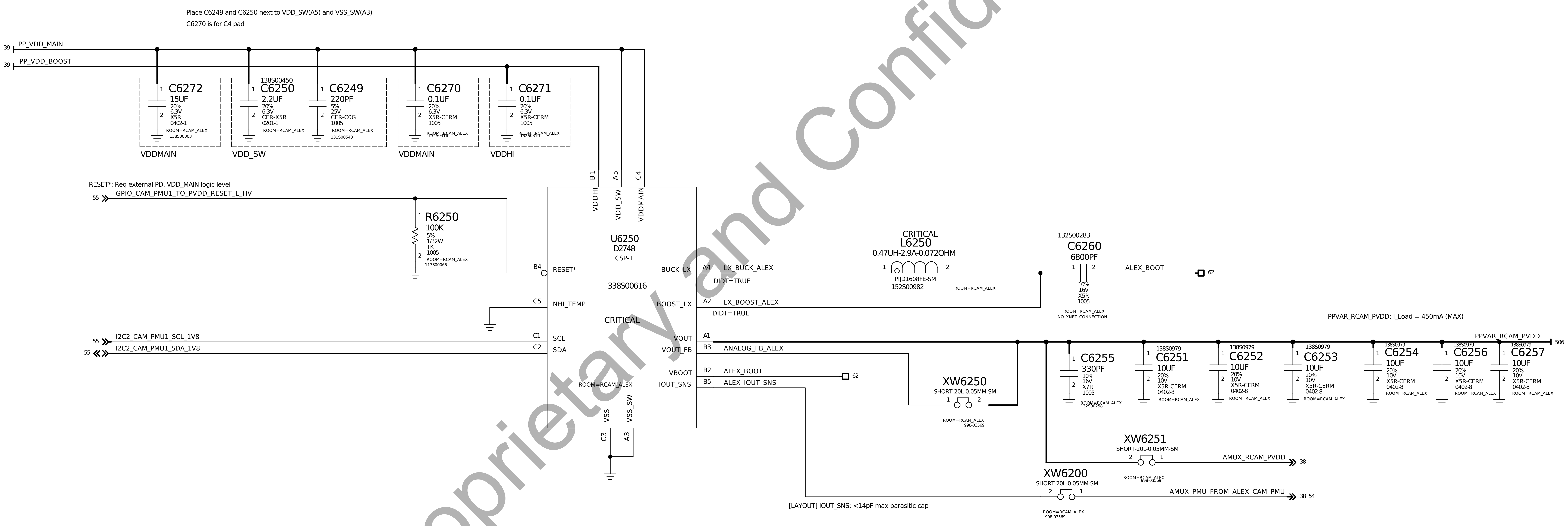
Actuator Supply



Place C6249 and C6250 next to VDD_SW(A5) and VSS_SW(A3)
C6270 is for C4 pad
39 PP_VDD_MAIN
39 PP_VDD_BOOST
C6272 15UF 20% 6.3V X5R 0402-1 ROOM=RCAM_ALEX 138S00003
138S00450 C6250 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=RCAM_ALEX
C6249 220PF 5% 25V CER-C0G 1005 ROOM=RCAM_ALEX 131S00543
C6270 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=RCAM_ALEX 132S0316
C6271 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=RCAM_ALEX 132S0316
VDDMAIN
VDD_SW
VDDMAIN
VDDHI
RESET*: Req external PD, VDD_MAIN logic level
55 GPIO_CAM_PMU1_TO_PVDD_RESET_L_HV
R6250 100K 5% 1/32W TK 1005 ROOM=RCAM_ALEX 117S00065
B1 VDDHI
A5 VDD_SW
C4 VDDMAIN
U6250 D2748 CSP-1
338S00616
CRITICAL
B4 RESET*
C5 NHI_TEMP
C1 SCL
C2 SDA
ROOM=RCAM_ALEX
VSS C3
VSS_SW A3
A4 BUCK_LX LX_BUCK_ALEX DIDT=TRUE
A2 BOOST_LX LX_BOOST_ALEX DIDT=TRUE
A1 VOUT
B3 VOUT_FB ANALOG_FB_ALEX
B2 VBOOT ALEX_BOOT 62
B5 IOUT_SNS ALEX_IOUT_SNS
55 I2C2_CAM_PMU1_SCL_1V8
55 I2C2_CAM_PMU1_SDA_1V8
CRITICAL L6250 0.47UH-2.9A-0.072OHM PIJD1608FE-SM 152S00982 ROOM=RCAM_ALEX
132S00283 C6260 6800PF 10% 16V X5R 1005 ROOM=RCAM_ALEX NO_XNET_CONNECTION
ALEX_BOOT 62
PPVAR_RCAM_PVDD: I_Load = 450mA (MAX)
PPVAR_RCAM_PVDD 506
C6255 330PF 10% 16V X7R 1005 ROOM=RCAM_ALEX 132S00258
138S0979 C6251 10UF 20% 10V X5R-CERM 0402-8 ROOM=RCAM_ALEX
138S0979 C6252 10UF 20% 10V X5R-CERM 0402-8 ROOM=RCAM_ALEX
138S0979 C6253 10UF 20% 10V X5R-CERM 0402-8 ROOM=RCAM_ALEX
138S0979 C6254 10UF 20% 10V X5R-CERM 0402-8 ROOM=RCAM_ALEX
138S0979 C6256 10UF 20% 10V X5R-CERM 0402-8 ROOM=RCAM_ALEX
138S0979 C6257 10UF 20% 10V X5R-CERM 0402-8 ROOM=RCAM_ALEX
XW6250 SHORT-20L-0.05MM-SM ROOM=RCAM_ALEX 998-03569
XW6251 SHORT-20L-0.05MM-SM ROOM=RCAM_ALEX 998-03569
AMUX_RCAM_PVDD 38
XW6200 SHORT-20L-0.05MM-SM ROOM=RCAM_ALEX 998-03569
AMUX_PMU_FROM_ALEX_CAM_PMU 38 54
[LAYOUT] IOUT_SNS: <14pF max parasitic cap

PAGE TITLE

CAMERA: Actuator Supply (Alex) (62)

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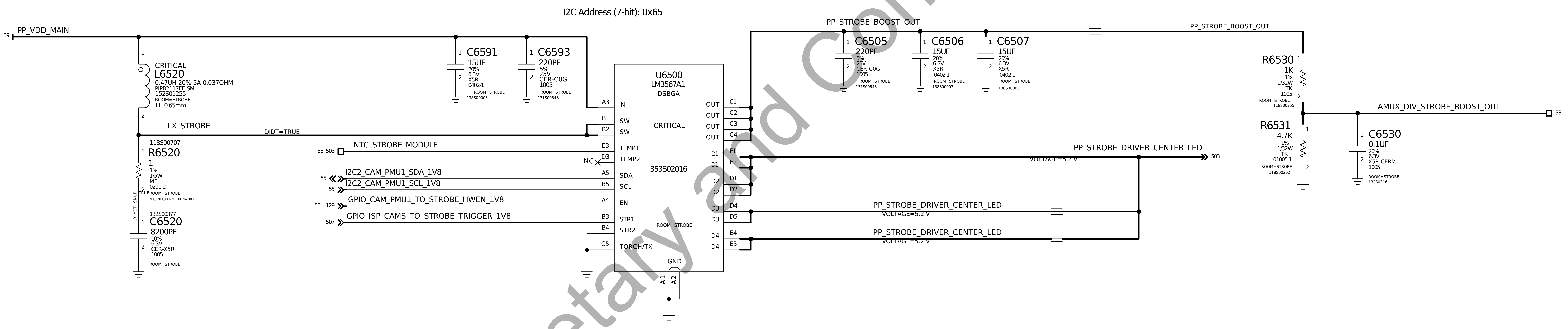
LED STROBE DRIVER


I2C Address (7-bit): 0x65
39
PP_VDD_MAIN
1
CRITICAL
L6520
0.47UH-20%-5A-0.037OHM
PIPB2117FE-SM
152S01255
ROOM=STROBE
H=0.65mm
2
LX_STROBE
DIDT=TRUE
118S00707
1
R6520
1
1%
1/5W
MF
0201-2
2
TRUE
ROOM=STROBE
NO_XNET_CONNECTION=TRUE
LX_YETI_SNUB
132S00377
1
C6520
8200PF
10%
6.3V
CER-X5R
1005
2
ROOM=STROBE
C6591
15UF
20%
6.3V
X5R
0402-1
ROOM=STROBE
138S00003
C6593
220PF
5%
25V
CER-C0G
1005
ROOM=STROBE
131S00543
55 503
NTC_STROBE_MODULE
55
I2C2_CAM_PMU1_SDA_1V8
55
I2C2_CAM_PMU1_SCL_1V8
55 129
GPIO_CAM_PMU1_TO_STROBE_HWEN_1V8
507
GPIO_ISP_CAMS_TO_STROBE_TRIGGER_1V8
U6500
LM3567A1
DSBGA
A3 IN
B1 SW
B2 SW
CRITICAL
E3 TEMP1
NC D3 TEMP2
A5 SDA
B5 SCL
353S02016
A4 EN
B3 STR1
B4 STR2
ROOM=STROBE
C5 TORCH/TX
GND
A1
A2
OUT C1
OUT C2
OUT C3
OUT C4
D1 E1
D1 E2
D2 D1
D2 D2
D3 D4
D3 D5
D4 E4
D4 E5
PP_STROBE_BOOST_OUT
C6505
220PF
5%
25V
CER-C0G
1005
ROOM=STROBE
131S00543
C6506
15UF
20%
6.3V
X5R
0402-1
ROOM=STROBE
138S00003
C6507
15UF
20%
6.3V
X5R
0402-1
ROOM=STROBE
138S00003
PP_STROBE_BOOST_OUT
PP_STROBE_DRIVER_CENTER_LED
VOLTAGE=5.2 V
503
PP_STROBE_DRIVER_CENTER_LED
VOLTAGE=5.2 V
PP_STROBE_DRIVER_CENTER_LED
VOLTAGE=5.2 V
R6530
1K
1%
1/32W
TK
1005
ROOM=STROBE
118S00255
R6531
4.7K
1%
1/32W
TK
01005-1
ROOM=STROBE
118S00262
AMUX_DIV_STROBE_BOOST_OUT
38
C6530
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=STROBE
132S0316

PAGE TITLE
CAMERA: Strobe Driver (65)

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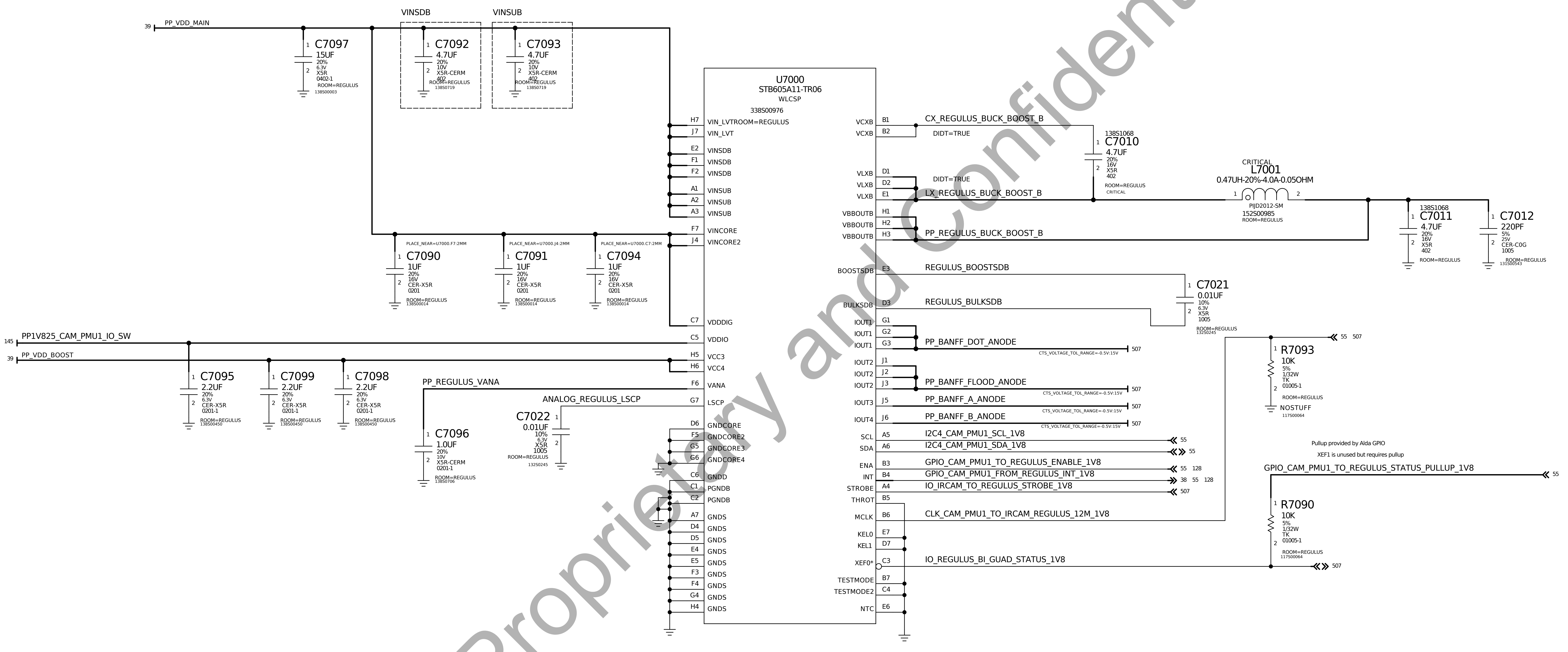
VCSEL DRIVER

SUBSYSTEM SPECIFIC BOM TABLES

INDUCTOR: Alt covered with PMU inductor BOM table


PP_VDD_MAIN
VINSDB
VINSUB
C7097 15UF 20% 6.3V X5R 0402-1 ROOM=REGULUS 138S00003
C7092 4.7UF 20% 10V X5R-CERM 402 ROOM=REGULUS 138S0719
C7093 4.7UF 20% 10V X5R-CERM 402 ROOM=REGULUS 138S0719
U7000
STB605A11-TR06
WLCSP
338S00976
VIN_LVTROOM=REGULUS
VIN_LVT
VINSDB
VINSUB
VINCORE
VINCORE2
VDDDIG
VDDIO
VCC3
VCC4
VANA
LSCP
GNDCORE
GNDCORE2
GNDCORE3
GNDCORE4
GNDD
PGNDB
GNDS
VCXB
VLXB
VBBOUTB
BOOSTSDB
BULKSDB
IOUT1
IOUT2
IOUT3
IOUT4
SCL
SDA
ENA
INT
STROBE
THROT
MCLK
KEL0
KEL1
XEF0*
TESTMODE
TESTMODE2
NTC
C7090 1UF 20% 16V CER-X5R 0201 ROOM=REGULUS 138S00014
C7091 1UF 20% 16V CER-X5R 0201 ROOM=REGULUS 138S00014
C7094 1UF 20% 16V CER-X5R 0201 ROOM=REGULUS 138S00014
PLACE_NEAR=U7000.F7:2MM
PLACE_NEAR=U7000.J4:2MM
PLACE_NEAR=U7000.C7:2MM
PP1V825_CAM_PMU1_IO_SW
PP_VDD_BOOST
C7095 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=REGULUS 138S00450
C7099 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=REGULUS 138S00450
C7098 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=REGULUS 138S00450
PP_REGULUS_VANA
C7096 1.0UF 20% 10V X5R-CERM 0201-1 ROOM=REGULUS 138S0706
ANALOG_REGULUS_LSCP
C7022 0.01UF 10% 6.3V X5R 1005 ROOM=REGULUS 132S0245
CX_REGULUS_BUCK_BOOST_B
DIDT=TRUE
C7010 138S1068 4.7UF 20% 16V X5R 402 ROOM=REGULUS CRITICAL
LX_REGULUS_BUCK_BOOST_B
CRITICAL
L7001 0.47UH-20%-4.0A-0.05OHM
PIJD2012-SM 152S00985 ROOM=REGULUS
PP_REGULUS_BUCK_BOOST_B
C7011 138S1068 4.7UF 20% 16V X5R 402 ROOM=REGULUS
C7012 220PF 5% 25V CER-C0G 1005 ROOM=REGULUS 131S00543
REGULUS_BOOSTSDB
REGULUS_BULKSDB
C7021 0.01UF 10% 6.3V X5R 1005 ROOM=REGULUS 132S0245
PP_BANFF_DOT_ANODE
PP_BANFF_FLOOD_ANODE
PP_BANFF_A_ANODE
PP_BANFF_B_ANODE
CTS_VOLTAGE_TOL_RANGE=-0.5V:15V
I2C4_CAM_PMU1_SCL_1V8
I2C4_CAM_PMU1_SDA_1V8
GPIO_CAM_PMU1_TO_REGULUS_ENABLE_1V8
GPIO_CAM_PMU1_FROM_REGULUS_INT_1V8
IO_IRCAM_TO_REGULUS_STROBE_1V8
CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8
IO_REGULUS_BI_GUAD_STATUS_1V8
R7093 10K 5% 1/32W TK 01005-1 ROOM=REGULUS NOSTUFF 117S00064
Pullup provided by Alda GPIO
XEF1 is unused but requires pullup
GPIO_CAM_PMU1_TO_REGULUS_STATUS_PULLUP_1V8
R7090 10K 5% 1/32W TK 01005-1 ROOM=REGULUS 117S00064

PAGE TITLE

VCSEL Driver (70)

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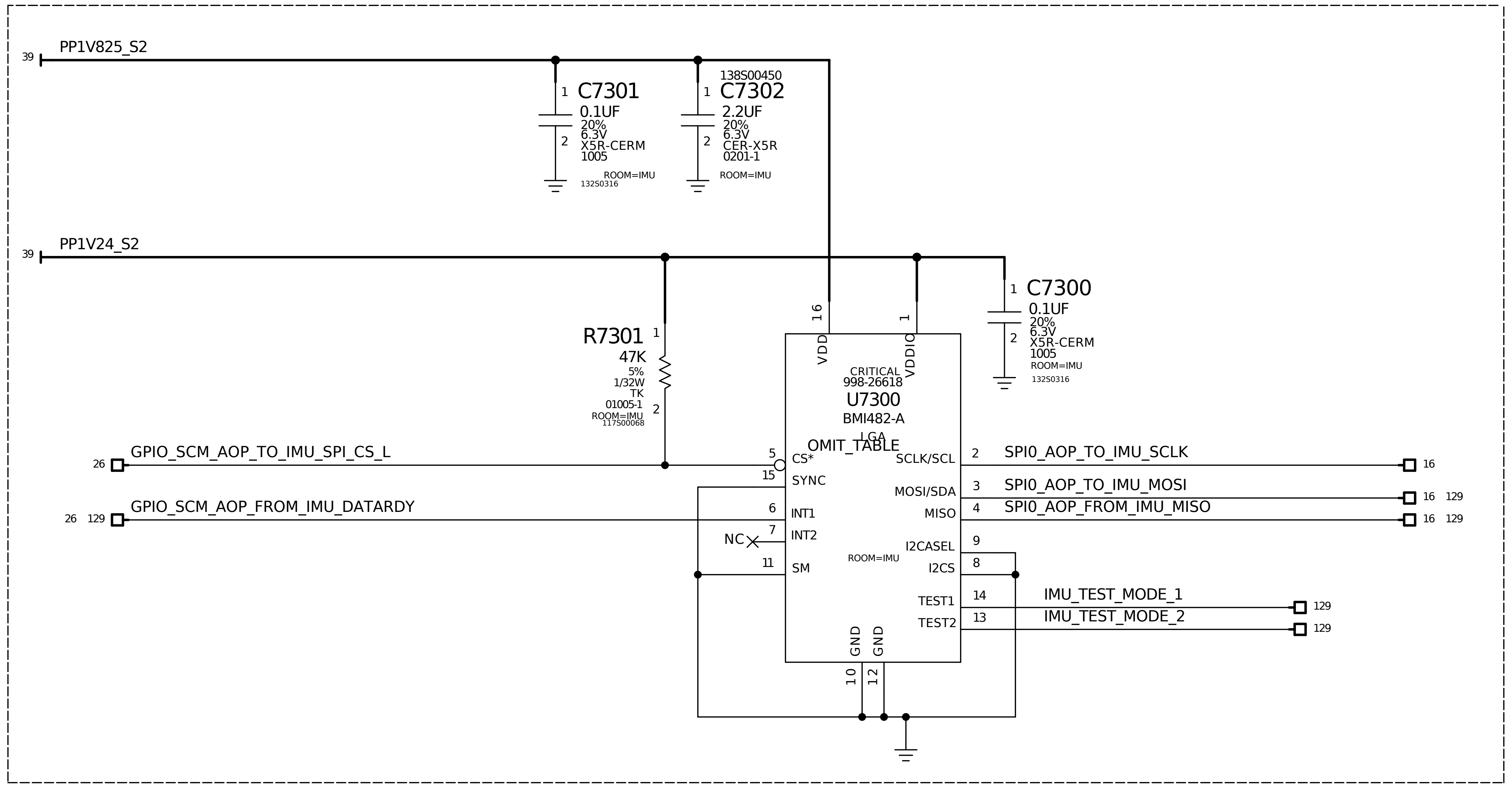
IMU - ACCEL & GYRO

IMU


39
PP1V825_S2
C7301
1
0.1UF
20%
6.3V
X5R-CERM
1005
2
ROOM=IMU
132S0316
138S00450
C7302
1
2.2UF
20%
6.3V
CER-X5R
0201-1
2
ROOM=IMU
39
PP1V24_S2
R7301
1
47K
5%
1/32W
TK
01005-1
ROOM=IMU
117S00068
2
C7300
1
0.1UF
20%
6.3V
X5R-CERM
1005
2
ROOM=IMU
132S0316
16
VDD
1
VDDIO
CRITICAL
998-26618
U7300
BMI482-A
LGA
OMIT_TABLE
26
GPIO_SCM_AOP_TO_IMU_SPI_CS_L
5
CS*
15
SYNC
26 129
GPIO_SCM_AOP_FROM_IMU_DATARDY
6
INT1
NC
7
INT2
11
SM
ROOM=IMU
SCLK/SCL
2
SPI0_AOP_TO_IMU_SCLK
16
MOSI/SDA
3
SPI0_AOP_TO_IMU_MOSI
16 129
MISO
4
SPI0_AOP_FROM_IMU_MISO
16 129
I2CASEL
9
I2CS
8
TEST1
14
IMU_TEST_MODE_1
129
TEST2
13
IMU_TEST_MODE_2
129
GND
GND
10
12

PAGE TITLE
SENSORS: Accel / Gyro (73)

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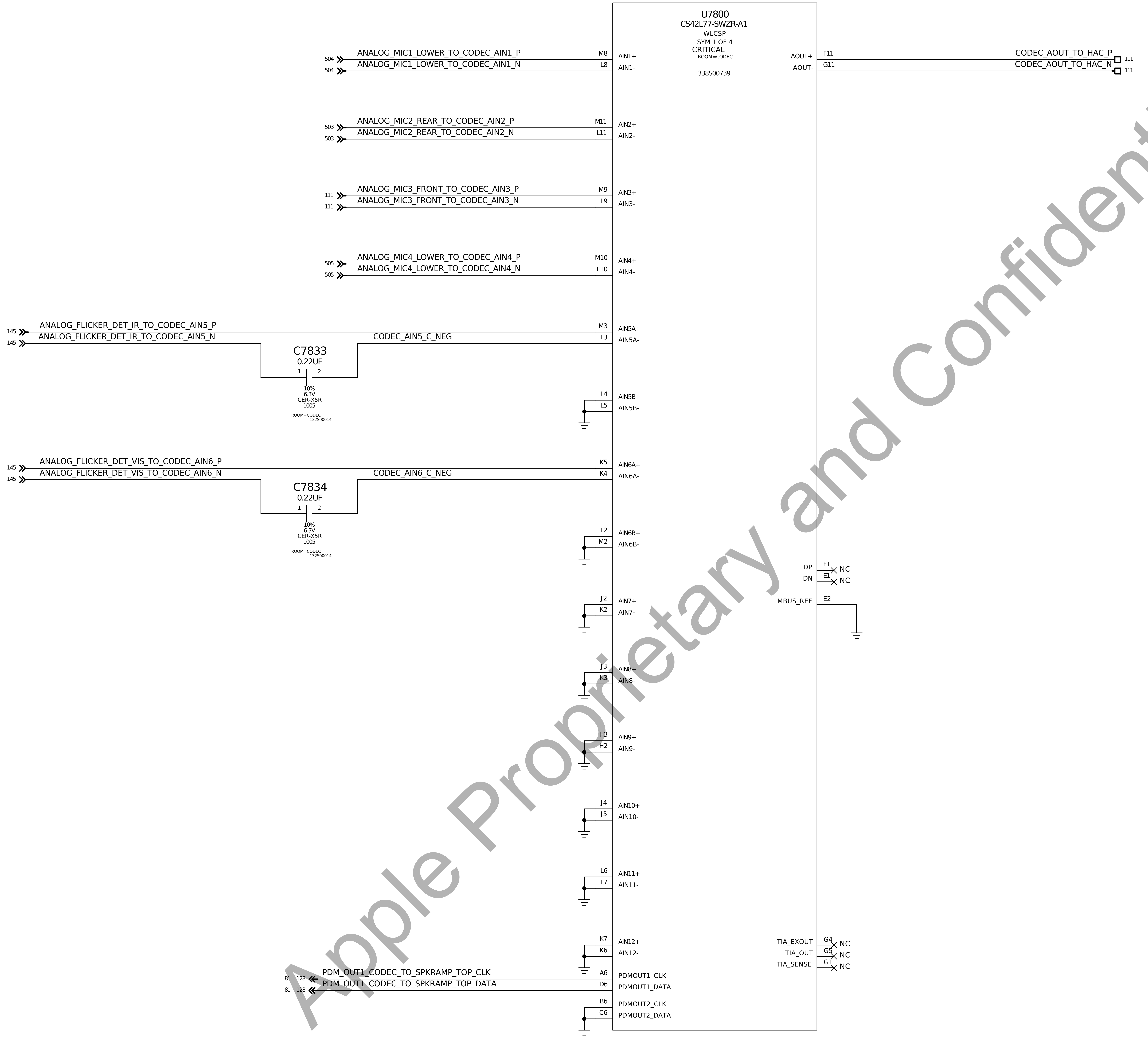
AUDIO CODEC (ANALOG INPUTS & OUTPUTS)


U7800
CS42L77-SWZR-A1
WLCSP
SYM 1 OF 4
CRITICAL
ROOM=CODEC
338S00739
504 ANALOG_MIC1_LOWER_TO_CODEC_AIN1_P M8 AIN1+
504 ANALOG_MIC1_LOWER_TO_CODEC_AIN1_N L8 AIN1-
503 ANALOG_MIC2_REAR_TO_CODEC_AIN2_P M11 AIN2+
503 ANALOG_MIC2_REAR_TO_CODEC_AIN2_N L11 AIN2-
111 ANALOG_MIC3_FRONT_TO_CODEC_AIN3_P M9 AIN3+
111 ANALOG_MIC3_FRONT_TO_CODEC_AIN3_N L9 AIN3-
505 ANALOG_MIC4_LOWER_TO_CODEC_AIN4_P M10 AIN4+
505 ANALOG_MIC4_LOWER_TO_CODEC_AIN4_N L10 AIN4-
145 ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_P M3 AIN5A+
145 ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_N
CODEC_AIN5_C_NEG L3 AIN5A-
C7833
0.22UF
1
2
10%
6.3V
CER-X5R
1005
ROOM=CODEC
132S00014
L4 AIN5B+
L5 AIN5B-
145 ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_P K5 AIN6A+
145 ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_N
CODEC_AIN6_C_NEG K4 AIN6A-
C7834
0.22UF
1
2
10%
6.3V
CER-X5R
1005
ROOM=CODEC
132S00014
L2 AIN6B+
M2 AIN6B-
J2 AIN7+
K2 AIN7-
J3 AIN8+
K3 AIN8-
H3 AIN9+
H2 AIN9-
J4 AIN10+
J5 AIN10-
L6 AIN11+
L7 AIN11-
K7 AIN12+
K6 AIN12-
81 128 PDM_OUT1_CODEC_TO_SPKRAMP_TOP_CLK A6 PDMOUT1_CLK
81 128 PDM_OUT1_CODEC_TO_SPKRAMP_TOP_DATA D6 PDMOUT1_DATA
B6 PDMOUT2_CLK
C6 PDMOUT2_DATA
AOUT+ F11 CODEC_AOUT_TO_HAC_P 111
AOUT- G11 CODEC_AOUT_TO_HAC_N 111
DP F1 NC
DN E1 NC
MBUS_REF E2
TIA_EXOUT G4 NC
TIA_OUT G5 NC
TIA_SENSE G1 NC

PAGE TITLE
AUDIO: Codec: Analog (1/2) (78)

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AUDIO CODEC (POWER & I/O)

Can change to 2.2uF if placed near Boost
39 PP_VDD_BOOST
C7910 10UF 20% 10V X5R-CERM 0402-B ROOM=CODEC 138S0979
C7911 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=CODEC 132S0316
39 81 PP1V825_S2
39 81 PP1V24_S2
C7902 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=CODEC 132S0316
C7903 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=CODEC 132S0316
C7904 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=CODEC 132S0316
C7905 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=CODEC 132S0316
PLACE_NEAR=U7800.A4:2MM
C7920 1.0UF 20% 10V X5R-CERM 0201-1 ROOM=CODEC 138S0706
C7901 10UF 20% 10V X5R-CERM 0402-B ROOM=CODEC 138S0979
35 PP1V8_AUDIO_VA_S2
138S00450
C7915 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=CODEC
AGND_CODEC
U7800 CS42L77-SWZR-A1 WLCSP SYM 4 OF 4 CRITICAL ROOM=CODEC 338S00739
G12 VDD_P
F2 VDD_MBUS
H1 VDD_1P8
E12 VIO_GPIO
D10 VIO_I2C
A5 VIO_SPI
E3 VIO_MCLK
A11 VIO_ASP
B3 VIO_SWIRE
A7 VIO_PDM
A4 VDD_D0
D12 VDD_D1
M4 VDD_A
GND_D0 A1
GND_D1 A12
GND_D2 A8
GND_D3 B4
GND_D4 C12
GND_D5 D1
GND_D6 E6
GND_D7 J1
GND_D8 M1
GND_P0 F12
GND_P1 M12
I2C ADDRESS: 1001 010x
U7800 CS42L77-SWZR-A1 WLCSP SYM 3 OF 4 CRITICAL ROOM=CODEC 338S00739
26 128 GPIO_AOP_TO_CODEC_RESET_L H7 RESET*
NC H8 WAKE*
26 128 GPIO_AP_FROM_CODEC_INT_L E11 INT*
E9 I2C_ADDR
25 I2C2_AOP_SCL C11 I2C_SCL
25 I2C2_AOP_SDA E8 I2C_SDA
27 SPI3_AP_TO_CODEC_SCLK B5 SPI_SCK
27 128 SPI3_AP_TO_CODEC_CS_L E5 SPI_SS*
27 128 SPI3_AP_TO_CODEC_MOSI D5 SPI_MOSI
27 128 SPI3_AP_FROM_CODEC_MISO C5 SPI_MISO
16 I2S1_AOP_TO_CODEC_MCLK1 C2 MCLK1_IN
D3 MCLK2_IN
NC C1 MCLK_OUT
16 128 I2S1_AOP_FROM_CODEC_ASP1_BCLK B7 ASP1_BCLK
16 128 I2S1_AOP_FROM_CODEC_ASP1_LRCLK E7 ASP1_FSYNC
16 128 I2S1_AOP_TO_CODEC_ASP1_DOUT D7 ASP1_DIN
16 128 I2S1_AOP_FROM_CODEC_ASP1_DIN C7 ASP1_DOUT
16 128 I2S2_AOP_TO_CODEC_ASP2_BCLK A9 ASP2_BCLK
16 128 I2S2_AOP_TO_CODEC_ASP2_LRCLK D8 ASP2_FSYNC
16 128 I2S2_AOP_TO_CODEC_ASP2_DOUT C8 ASP2_DIN
16 128 I2S2_AOP_FROM_CODEC_ASP2_DIN B8 ASP2_DOUT
16 506 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK A10 ASP3_BCLK
16 506 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_LRCLK D9 ASP3_FSYNC
16 506 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_DOUT C9 ASP3_DIN
16 506 I2S3_AOP_FROM_ARCAMP_CODEC_ASP3_DIN B9 ASP3_DOUT
B12 ASP4_BCLK
C10 ASP4_FSYNC
B10 ASP4_DIN
B11 ASP4_DOUT
C4 SWIRE1_CLK0
A2 SWIRE1_CLK1
A3 SWIRE1_CLK2
C3 SWIRE1_DATA0
D4 SWIRE1_DATA1
E4 SWIRE1_DATA2
B1 SWIRE2_CLK0
B2 SWIRE2_CLK1
F4 SWIRE2_DATA0
F7 CLP_EN
GPIO3_JTAG_TRST* E10
GPIO4_JTAG_TDO D11
GPIO5_JTAG_TMS F8
GPIO2_JTAG_TDI F9
GPIO1_JTAG_TCK F10
TSTI D2
TSTI J7
TSTO H4 NC
U7800 CS42L77-SWZR-A1 WLCSP SYM 2 OF 4 CRITICAL ROOM=CODEC 338S00739
505 PP_CODEC_TO_MIC1_LOWER_BIAS K9 MIC1_BIAS
504 RET_CODEC_FROM_MIC1_LOWER J9 MIC1_BIAS_REF
503 PP_CODEC_TO_MIC2_REAR_BIAS K11 MIC2_BIAS
503 RET_CODEC_FROM_MIC2_REAR J10 MIC2_BIAS_REF
111 PP_CODEC_TO_MIC3_FRONT_BIAS L12 MIC3_BIAS
111 RET_CODEC_FROM_MIC3_FRONT K10 MIC3_BIAS_REF
505 PP_CODEC_TO_MIC4_LOWER_BIAS K12 MIC4_BIAS
505 RET_CODEC_FROM_MIC4_LOWER H9 MIC4_BIAS_REF
NC H11 MIC5_BIAS
NC G9 MIC5_BIAS_REF
NC J11 MIC6_BIAS
NC H10 MIC6_BIAS_REF
G10 MICBIAS_DIS
C7928 1.0UF 20% 10V X5R-CERM 0201-1 ROOM=CODEC 138S0706
C7927 1.0UF 20% 10V X5R-CERM 0201-1 ROOM=CODEC 138S0706
C7926 1.0UF 20% 10V X5R-CERM 0201-1 ROOM=CODEC 138S0706
C7925 1.0UF 20% 10V X5R-CERM 0201-1 ROOM=CODEC 138S0706
MIC_FILT+ H12 CODEC_MIC_FILTP
MIC_FILT- J12 AGND_CODEC
138S00450
C7930 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=CODEC NO_XNET_CONNECTION=TRUE
LP_FILT+ K1 CODEC_LP_FILTP
LP_FILT- L1 CODEC_LP_FILTN
C7931 0.1UF 20% 6.3V X5R-CERM 1005 ROOM=CODEC NO_XNET_CONNECTION=TRUE 132S0316
FILT+ M7 CODEC_FILTP
FILT- M6 AGND_CODEC
C7932 10UF 20% 10V X5R-CERM 0402-B ROOM=CODEC NO_XNET_CONNECTION=TRUE 138S0979
GND_A0 F3
GND_A1 F5
GND_A2 G7
GND_A3 G8
GND_A4 H5
GND_A5 H6
GND_A6 J6
GND_A7 J8
GND_A8 K8
GND_A9 M5
GND_A10 F6
GND_A11 G2
GND_A12 G3
GND_A13 G6
AGND_CODEC
XW7902 SHORT-10L-0.1MM-SM 1 2 ROOM=CODEC NO_XNET_CONNECTION 998-1870
8 7 6 5 4 3 2 1
D C B A

PAGE TITLE
AUDIO: Codec: Power & I/O (2/2) (79)

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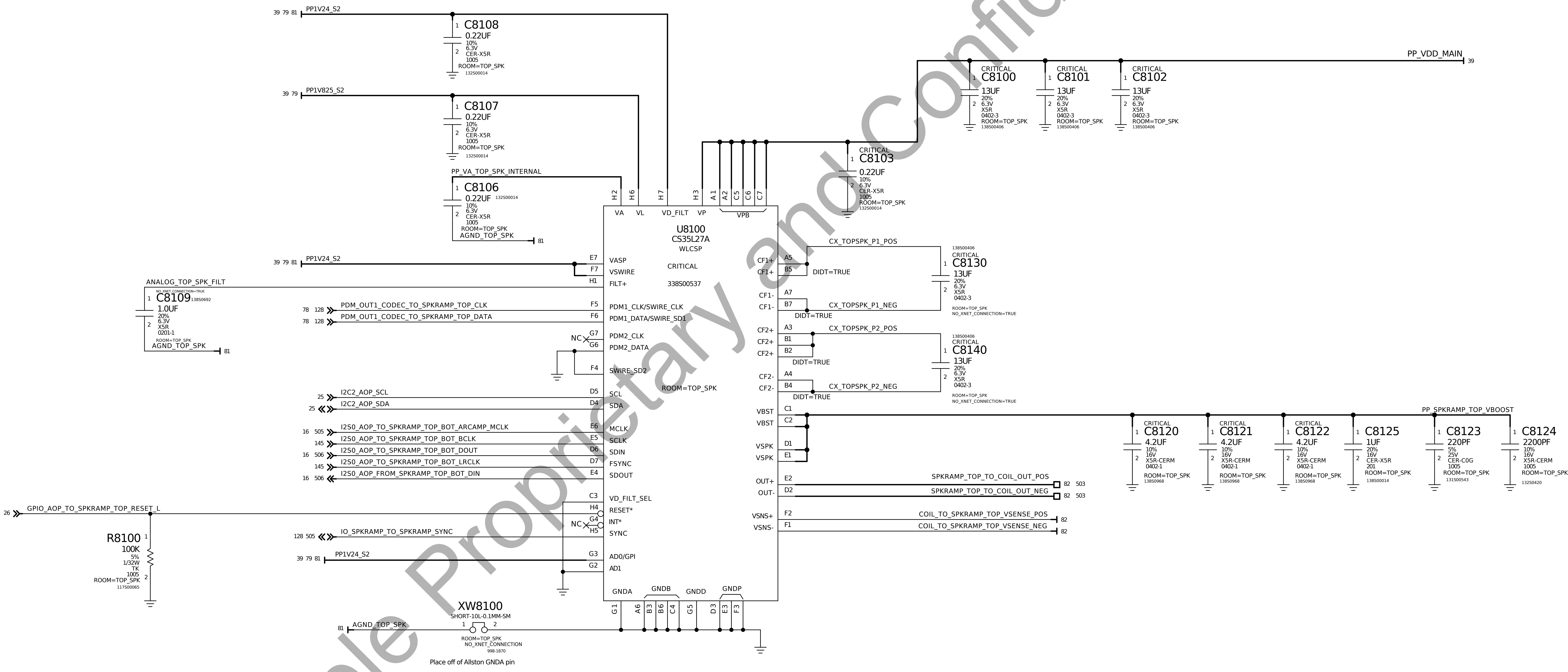
TOP SPEAKER AMP


PP1V24_S2
39 79 81
C8108
0.22UF
10%
6.3V
CER-X5R
1005
ROOM=TOP_SPK
132S00014
PP1V825_S2
C8107
PP_VA_TOP_SPK_INTERNAL
C8106
AGND_TOP_SPK
81
ANALOG_TOP_SPK_FILT
C8109
1.0UF
20%
6.3V
X5R
0201-1
NO_XNET_CONNECTION=TRUE
138S0692
PDM_OUT1_CODEC_TO_SPKRAMP_TOP_CLK
PDM_OUT1_CODEC_TO_SPKRAMP_TOP_DATA
78 128
NC
I2C2_AOP_SCL
I2C2_AOP_SDA
25
I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK
I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK
I2S0_AOP_TO_SPKRAMP_TOP_BOT_DOUT
I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK
I2S0_AOP_FROM_SPKRAMP_TOP_BOT_DIN
16 505
145
16 506
GPIO_AOP_TO_SPKRAMP_TOP_RESET_L
26
R8100
100K
5%
1/32W
TK
1005
117S00065
IO_SPKRAMP_TO_SPKRAMP_SYNC
128 505
XW8100
SHORT-10L-0.1MM-SM
NO_XNET_CONNECTION
998-1870
Place off of Allston GNDA pin
U8100
CS35L27A
WLCSP
CRITICAL
338S00537
ROOM=TOP_SPK
VA VL VD_FILT VP VPB
VASP VSWIRE FILT+
PDM1_CLK/SWIRE_CLK
PDM1_DATA/SWIRE_SD1
PDM2_CLK PDM2_DATA
SWIRE_SD2
SCL SDA MCLK SCLK SDIN FSYNC SDOUT
VD_FILT_SEL RESET* INT* SYNC AD0/GPI AD1
GNDA GNDB GNDD GNDP
CF1+ CF1- CF2+ CF2-
VBST VSPK OUT+ OUT- VSNS+ VSNS-
DIDT=TRUE
CX_TOPSPK_P1_POS
CX_TOPSPK_P1_NEG
CX_TOPSPK_P2_POS
CX_TOPSPK_P2_NEG
C8130
C8140
13UF
0402-3
138S00406
PP_VDD_MAIN
39
C8100
C8101
C8102
C8103
CRITICAL
PP_SPKRAMP_TOP_VBOOST
C8120
C8121
C8122
4.2UF
16V
X5R-CERM
0402-1
138S0968
C8125
1UF
CER-X5R
201
C8123
220PF
25V
CER-C0G
131S00543
C8124
2200PF
X5R-CERM
132S0420
SPKRAMP_TOP_TO_COIL_OUT_POS
SPKRAMP_TOP_TO_COIL_OUT_NEG
82 503
COIL_TO_SPKRAMP_TOP_VSENSE_POS
COIL_TO_SPKRAMP_TOP_VSENSE_NEG
82

PAGE TITLE

AUDIO: Top Speaker Amp (81)

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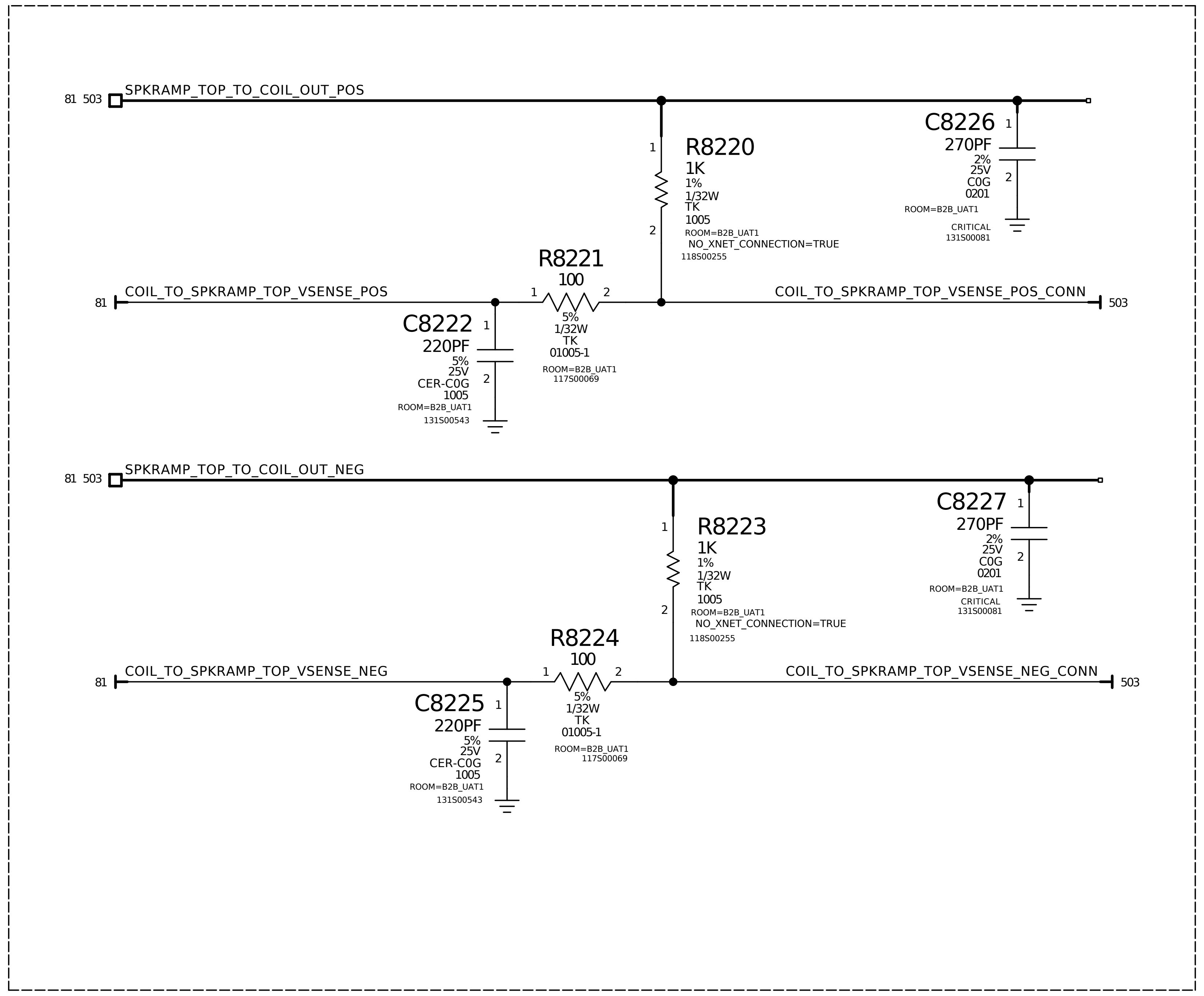
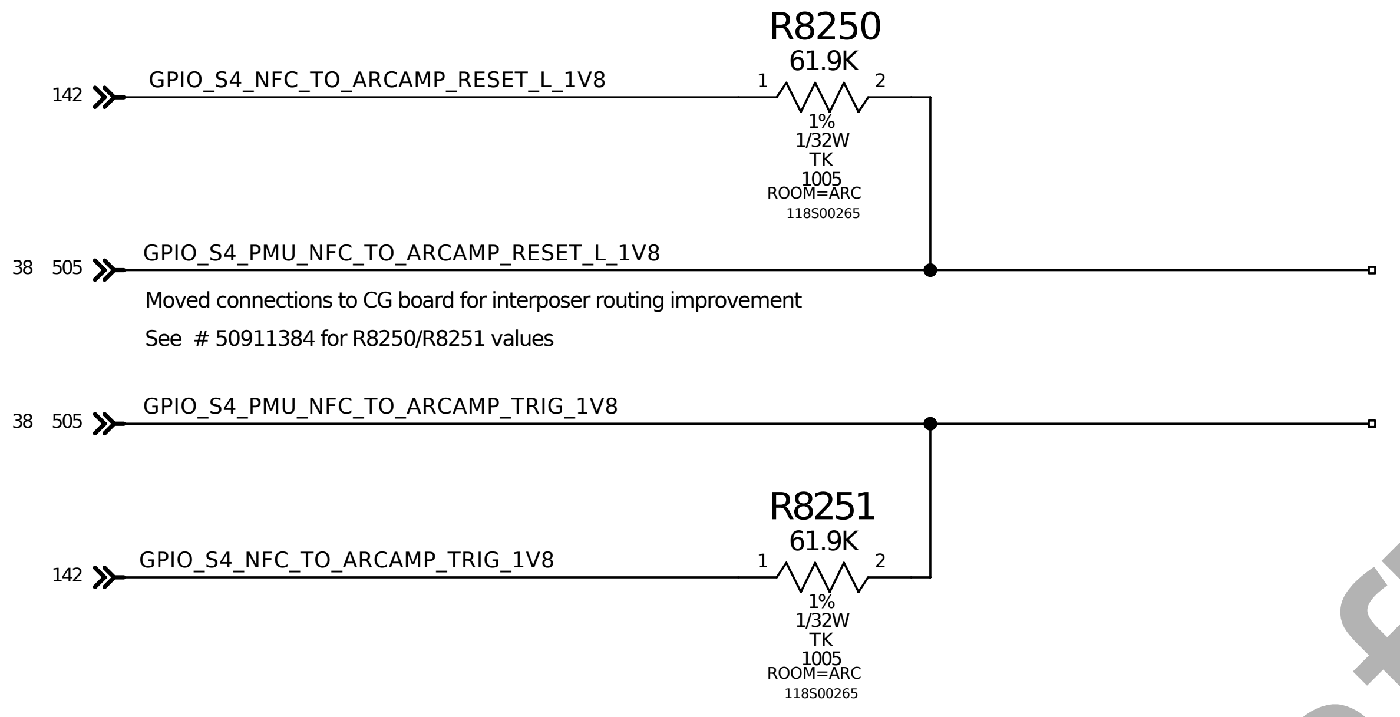
TOP Speaker Filters


81 503 SPKRAMP_TOP_TO_COIL_OUT_POS
R8220
1K
1%
1/32W
TK
1005
ROOM=B2B_UAT1
NO_XNET_CONNECTION=TRUE
118S00255
C8226
270PF
2%
25V
C0G
0201
ROOM=B2B_UAT1
CRITICAL
131S00081
81 COIL_TO_SPKRAMP_TOP_VSENSE_POS
R8221
100
5%
1/32W
TK
01005-1
ROOM=B2B_UAT1
117S00069
COIL_TO_SPKRAMP_TOP_VSENSE_POS_CONN 503
C8222
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_UAT1
131S00543
81 503 SPKRAMP_TOP_TO_COIL_OUT_NEG
R8223
1K
1%
1/32W
TK
1005
ROOM=B2B_UAT1
NO_XNET_CONNECTION=TRUE
118S00255
C8227
270PF
2%
25V
C0G
0201
ROOM=B2B_UAT1
CRITICAL
131S00081
81 COIL_TO_SPKRAMP_TOP_VSENSE_NEG
R8224
100
5%
1/32W
TK
01005-1
ROOM=B2B_UAT1
117S00069
COIL_TO_SPKRAMP_TOP_VSENSE_NEG_CONN 503
C8225
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_UAT1
131S00543


142 GPIO_S4_NFC_TO_ARCAMP_RESET_L_1V8
R8250
61.9K
1%
1/32W
TK
1005
ROOM=ARC
118S00265
38 505 GPIO_S4_PMU_NFC_TO_ARCAMP_RESET_L_1V8
38 505 GPIO_S4_PMU_NFC_TO_ARCAMP_TRIG_1V8
R8251
61.9K
1%
1/32W
TK
1005
ROOM=ARC
118S00265
142 GPIO_S4_NFC_TO_ARCAMP_TRIG_1V8

Moved connections to CG board for interposer routing improvement

See # 50911384 for R8250/R8251 values

PAGE TITLE
AUDIO: CG Misc. (82)

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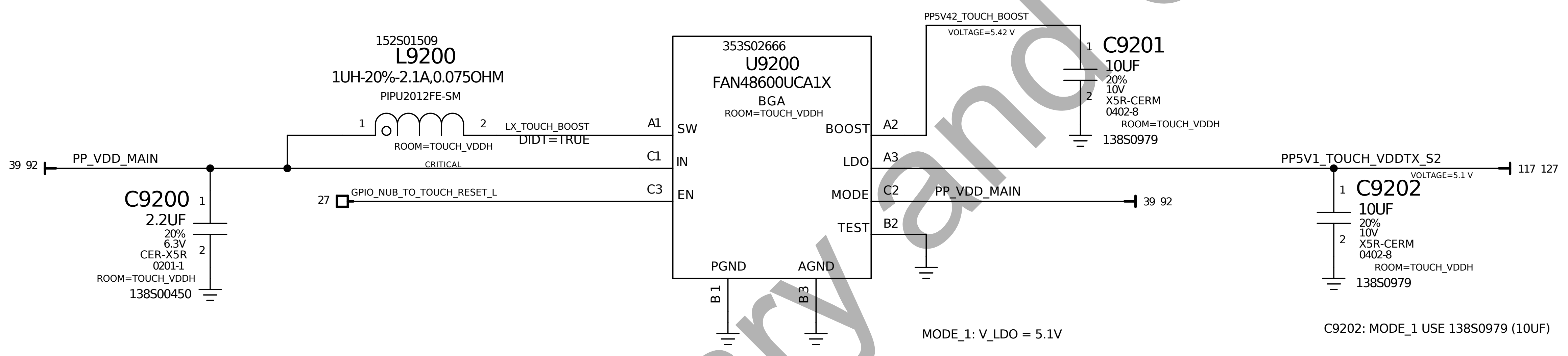
ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
152S00824	152S01509	L9200	TAIYO,1UH,20%,2A,69MO,H=0.65,2012

Touch Power


152S01509
L9200
1UH-20%-2.1A,0.075OHM
PIPU2012FE-SM
1
2
ROOM=TOUCH_VDDH
CRITICAL
LX_TOUCH_BOOST
DIDT=TRUE
39 92
PP_VDD_MAIN
C9200
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=TOUCH_VDDH
138S00450
27
GPIO_NUB_TO_TOUCH_RESET_L
353S02666
U9200
FAN48600UCA1X
BGA
ROOM=TOUCH_VDDH
A1
SW
C1
IN
C3
EN
BOOST
A2
LDO
A3
MODE
C2
TEST
B2
PGND
AGND
B1
B3
PP5V42_TOUCH_BOOST
VOLTAGE=5.42 V
C9201
10UF
20%
10V
X5R-CERM
0402-8
ROOM=TOUCH_VDDH
138S0979
PP_VDD_MAIN
39 92
PP5V1_TOUCH_VDDTX_S2
VOLTAGE=5.1 V
117 127
C9202
10UF
20%
10V
X5R-CERM
0402-8
ROOM=TOUCH_VDDH
138S0979
MODE_1: V_LDO = 5.1V
C9202: MODE_1 USE 138S0979 (10UF)

PAGE TITLE
TOP MODULE: Touch Power (92)

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DISPLAY PMIC

PART NUMBER	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
338S00578	U9300	C	1	IC,PMU,CHELAN2,S2DOS24,WFP47
152S01355	L9300	C	1	IND,MLD,6.8UH,20%,1.7A,220MO,H=0.95,2520

INDUCTOR ALTERNATES

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
152S01358	152S01357	L9310,L9320,L9330	TAIYO,2.2UH,20%,4A,65MO,H=0.95,3030
152S01356	152S01355	L9300	TAIYO,6.8UH,20%,1.2A,280MO,H=0.95,2520

PP_VDD_MAIN
39
PLACE NEAR VINP2A PINS
CRITICAL
C9304
15UF
20%
6.3V
X5R
0402-1
ROOM=D_PMIC
138S00003
C9397
0.47UF
20%
6.3V
X5R
01005-3
ROOM=D_PMIC
138S00412
C9398
0.47UF
20%
6.3V
X5R
01005-3
ROOM=D_PMIC
138S00412
C9300
220PF
5%
25V
CER-C0G
1005
ROOM=D_PMIC
131S00543
PLACE NEAR VINP2B PINS
C9301
220PF
5%
25V
CER-C0G
1005
ROOM=D_PMIC
131S00543
138S00450
C9393
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=D_PMIC
CRITICAL
C9303
15UF
20%
6.3V
X5R
0402-1
ROOM=D_PMIC
138S00003
PLACE NEAR VINA PINS
CRITICAL
C9305
15UF
20%
6.3V
X5R
0402-1
ROOM=D_PMIC
138S00003
CRITICAL
C9302
15UF
20%
6.3V
X5R
0402-1
ROOM=D_PMIC
138S00003
C9306
220PF
5%
25V
CER-C0G
1005
ROOM=D_PMIC
131S00543
PLACE NEAR L9310
138S00450
C9392
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=D_PMIC
CRITICAL
ROOM=D_PMIC
L9310
2.2UH-20%-4.1A-0.058OHM
3030
152S01357
PP1V825_S2
39
R9321
2.2K
5%
1/32W
TK
01005-1
ROOM=D_PMIC
117S00071
R9320
2.2K
5%
1/32W
TK
01005-1
ROOM=D_PMIC
117S00071
I2C_DISPLAY_SCL_1V8
118 127
I2C_DISPLAY_SDA_1V8
118 127
R9322
33.2
1%
1/32W
TK
01005-1
ROOM=D_PMIC
118S00261
I2C_DISPLAY_SDA_1V8_R
IO_DISPLAY_TO_DPMIC_VDDEL_VSSEL_EN_1V8
118
IO_DISPLAY_TO_DPMIC_AVDDH_EN_1V8
38 118
GPIO_SEQ_PMU_TO_DISPLAY_RESET_L_1V8
38 118
U9300
998-20509
CHELAN2-GAL-STUDY
BGA
CRITICAL
OMIT_TABLE
ROOM=D_PMIC
VINA
VINP2A
VINP2B
C7
E1
F1
G1
E7
F7
G7
SCL
SDA
STROBE_EN
VOUT12_EN
VOUT3_EN
RESET*
PANIC*
LX3
VOUT3
D4
D5
B6
D6
C5
D7
E4
A6
A5
NC
PMU_SHD*
PANIC_OUT*
ICLB
AMUX
VLDO1
VLDO1
FB1
LX1
LX1
LX1
VOUT1
VOUT1
VOUT1
LX2B
LX2B
LX2B
VOUT2B
VOUT2B
VOUT2B
VOUT2A
VOUT2A
VOUT2A
LX2A
LX2A
LX2A
D2
D3
D1
C6
A4
B4
C4
A2
B2
C2
A3
B3
C3
E6
F6
G6
E5
F5
G5
E3
F3
G3
E2
F2
G2
NC
NC
NC
NC
GNDA
GNDP1
GNDP2
GNDP3
B5
B7
A1
B1
C1
F4
G4
A7
IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L_1V8
38 102 118
38
C9317
1000PF
10%
10V
X5R
1005
ROOM=D_PMIC
132S00300
AMUX_PMU_FROM_DISPLAY
ANALOG_FB_DPMIC
XW9332
SHORT-20L-0.05MM-SM
ROOM=D_PMIC
NO_XNET_CONNECTION
998-03569
LX_DPMIC_VOUT1
DIDT=TRUE
OMIT_TABLE
CRITICAL
ROOM=D_PMIC
L9300
4.7UH-20%-2.2A-0.156OHM
2520-1
152S01353
PLACE NEAR L9300
138S00450
C9395
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=D_PMIC
DIDT=TRUE
LX_DPMIC_VOUT3
PP7V3_DISPLAY_AVDDH
118 127
VOLTAGE=7.3 V
NET_VOLTAGE=7.5V
C9310
220PF
5%
25V
CER-C0G
1005
ROOM=D_PMIC
131S00543
C9311
220PF
5%
25V
CER-C0G
1005
ROOM=D_PMIC
131S00543
C9312
22UF
20%
16V
X5R
704
ROOM=D_PMIC
138S00298
R9300
511K
1%
1/32W
TK
1005
ROOM=D_PMIC
118S00244
R9301
511K
1%
1/32W
TK
1005
ROOM=D_PMIC
118S00244
PP4V6_DISPLAY_VDDEL
118
VOLTAGE=4.6 V
C9325
220PF
5%
25V
CER-C0G
1005
ROOM=D_PMIC
131S00543
C9320
330PF
10%
16V
X7R
1005
ROOM=D_PMIC
132S00258
138S0758
C9321
22UF
20%
10V
X5R-CERM
0603-1
ROOM=D_PMIC
138S0758
C9322
22UF
20%
10V
X5R-CERM
0603-1
ROOM=D_PMIC
138S0758
C9323
22UF
20%
10V
X5R-CERM
0603-1
ROOM=D_PMIC
138S0758
C9324
22UF
20%
10V
X5R-CERM
0603-1
ROOM=D_PMIC
L9330
2.2UH-20%-4.1A-0.058OHM
3030
152S01357
LX_DPMIC_VOUT2B
DIDT=TRUE
L9320
2.2UH-20%-4.1A-0.058OHM
3030
152S01357
LX_DPMIC_VOUT2A
DIDT=TRUE
PNVAR_DISPLAY_VSSEL
118
C9334
220PF
5%
25V
CER-C0G
1005
ROOM=D_PMIC
131S00543
C9330
220PF
5%
25V
CER-C0G
1005
ROOM=D_PMIC
131S00543
C9331
22UF
20%
16V
X5R
704
ROOM=D_PMIC
138S00298
C9332
22UF
20%
16V
X5R
704
ROOM=D_PMIC
138S00298
C9333
10UF
20%
10V
X5R-CERM
0402-8
ROOM=D_PMIC
138S00979
VOUT2X:
Target voltage: -6V to -3V
Max operational: -7V
Max capable: -9V
Tie GNDP1/GNDP2/GNDP3
directly to GND plane

PAGE TITLE
TOP MODULE: Display Power (93)

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SUBSYSTEM SPECIFIC BOM TABLES

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
376S00314	376S00125	Q9520	XSTR,PFET,20V,4.2A,0.045 OHM,LGA3
371S0685	371S00318	DZ9520	DIODE,ZENER,10V,5%,250MW,DFN1006-2

U9500
SN2012027A33
WSCP
SYM 1 OF 3
353S03922
ROOM=E85_ACE
CRITICAL
95 96 PP_VBUS1_E85_RVP
A11 VBUS
B11 VBUS
C11 VBUS
D11 VBUS
R9500
100K
5%
1/32W
TK
1005
ROOM=E85_ACE
NOSTUFF
117S00065
PP_5V0 A10
PP_5V0 B10
PP_5V0 C10
PP_5V0 D10
PP_CABLE A8
PP_CABLE B8
PP_CABLE C8
PP5V25_ACC 98
126 180 505 PP_E85_CC1_CONN
D9 RPD_G1
A9 C_CC1
B9 C_CC1
C9 C_CC1
126 180 505 PP_E85_CC2_CONN
D7 RPD_G2
A7 C_CC2
B7 C_CC2
C7 C_CC2
126 180 505 90_E85_USB_BOT_CONN_P J10 C_USB_BP
126 180 505 90_E85_USB_BOT_CONN_N J9 C_USB_BN
126 180 505 90_E85_USB_TOP_CONN_P K10 C_USB_TP
126 180 505 90_E85_USB_TOP_CONN_N K9 C_USB_TN
126 180 504 IO_E85_SBU1 L7 C_SBU1
126 180 504 IO_E85_SBU2 L8 C_SBU2
USB_RP1_P K8 90_USB0_ACE_BI_PARROT_L_P
USB_RP1_N J8 90_USB0_ACE_BI_PARROT_L_N
USB_RP2_P K7 90_USB1_ACE_BI_PARROT_L_P
USB_RP2_N J7 90_USB1_ACE_BI_PARROT_L_N
USB_RP3_P K6
USB_RP3_N J6 USB_RP3
AUX_P L9
AUX_N L10 ACE_AUX
SWD_CLK H7 GPIO_AP_TO_ACE_SWCLK 26 128
SWD_DATA H8 GPIO_AP_BI_ACE_SWDIO 26 128
UART_RX J1 UART_ACE_TXRX
UART_TX K1
L9501
15NH-3%-0.17A-1.53OHM
PLACE_NEAR=U9500.K8:4MM
1005
152S00529
ROOM=E85_ACE
90_USB0_ACE_BI_PARROT_P 99
L9502
15NH-3%-0.17A-1.53OHM
PLACE_NEAR=U9500.J8:4MM
1005
152S00529
ROOM=E85_ACE
90_USB0_ACE_BI_PARROT_N 99
L9503
15NH-3%-0.17A-1.53OHM
PLACE_NEAR=U9500.K7:4MM
1005
152S00529
ROOM=E85_ACE
90_USB1_ACE_BI_PARROT_P 99
L9504
15NH-3%-0.17A-1.53OHM
PLACE_NEAR=U9500.J7:4MM
1005
152S00529
ROOM=E85_ACE
90_USB1_ACE_BI_PARROT_N 99
117S00065
R9507
100K
5%
1/32W
TK
1005
ROOM=E85_ACE
R9506
100K
5%
1/32W
TK
1005
ROOM=E85_ACE
117S00065
R9505
100K
5%
1/32W
TK
1005
ROOM=E85_ACE
117S00065
LDCM
H11 LDCM
G11 LDCM_LB
LDCM_SENSE G10 IO_E85_LDCM_SENSE
LDCM_COMP G9 IO_E85_LDCM_COMP
LDCM_SW J11
R9501
4.99K
1%
1/32W
TK
1005
ROOM=E85_ACE
118S00339
126 504 IO_E85_LDCM
R9502
402K
1%
1/32W
TK
1005
118S00436
ROOM=E85_ACE
C9502
2.2UF
20%
16V
X5R
201
138S00305
ROOM=E85_ACE
IO_E85_LDCM_RC
R9504
10K
0.1%
1/20W
TK
201
103S00593
ROOM=E85_ACE
IO_E85_LDCM_R
126 504 IO_E85_LDCM_LB
3.2A continuous DC current
-20V VSD max, 39mohms Rdson
Q9520
376S00125
40 126 180 505 PP_VBUS1_E85
CSD68832L
LGA
ROOM=E85_ACE
D
S
G
PP_VBUS1_E85_RVP 95 96
371S00318
DZ9520
BZT884C10LP
DFN10062
ROOM=E85_ACE
K
A
132S00366
C9520
1000PF
10%
16V
CER-X7R
01005
ROOM=E85_ACE
NOSTUFF
VBUS_RVP_GATE
R9520
220K
5%
1/32W
1005
TK
ROOM=E85_ACE
117S00107

PAGE TITLE
Controller (1/2) (95)

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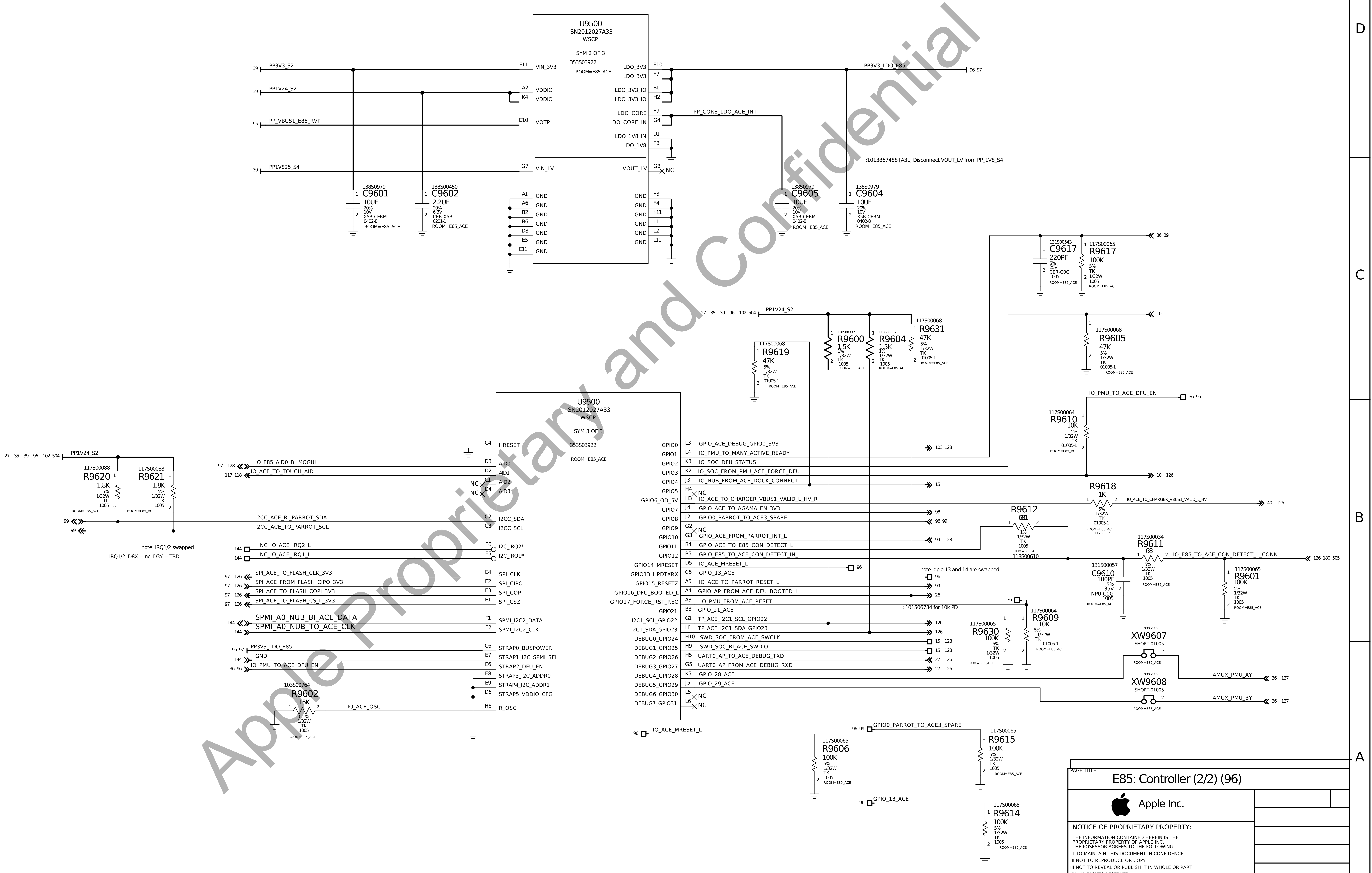
D
C
B
A
U9500
SN2012027A33
WSCP
SYM 2 OF 3
353S03922
ROOM=E85_ACE
39 PP3V3_S2
F11 VIN_3V3
39 PP1V24_S2
A2 VDDIO
K4 VDDIO
95 PP_VBUS1_E85_RVP
E10 VOTP
39 PP1V825_S4
G7 VIN_LV
A1 A6 B2 B6 D8 E5 E11 GND
F10 LDO_3V3
F7 LDO_3V3
B1 LDO_3V3_IO
H2 LDO_3V3_IO
F9 LDO_CORE
G4 LDO_CORE_IN
D1 LDO_1V8_IN
F8 LDO_1V8
G8 VOUT_LV NC
F3 F4 K11 L1 L2 L11 GND
PP3V3_LDO_E85 96 97
PP_CORE_LDO_ACE_INT
:1013867488 [A3L] Disconnect VOUT_LV from PP_1V8_S4
138S0979 C9601 10UF 20% 10V X5R-CERM 0402-8 ROOM=E85_ACE
138S00450 C9602 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=E85_ACE
138S0979 C9605 10UF 20% 10V X5R-CERM 0402-8 ROOM=E85_ACE
138S0979 C9604 10UF 20% 10V X5R-CERM 0402-8 ROOM=E85_ACE
36 39
131S00543 C9617 220PF 5% 25V CER-C0G 1005 ROOM=E85_ACE
117S00065 R9617 100K 5% TK 1/32W 1005 ROOM=E85_ACE
27 35 39 96 102 504 PP1V24_S2
117S00068 R9619 47K 5% 1/32W TK 01005-1 ROOM=E85_ACE
118S00332 R9600 1.5K 1% 1/32W TK 1005 ROOM=E85_ACE
118S00332 R9604 1.5K 1% 1/32W TK 1005 ROOM=E85_ACE
117S00068 R9631 47K 5% 1/32W TK 01005-1 ROOM=E85_ACE
10
117S00068 R9605 47K 5% 1/32W TK 01005-1 ROOM=E85_ACE
IO_PMU_TO_ACE_DFU_EN 36 96
117S00064 R9610 10K 5% 1/32W TK 01005-1 ROOM=E85_ACE
U9500
SN2012027A33
WSCP
SYM 3 OF 3
353S03922
ROOM=E85_ACE
C4 HRESET
D3 AID0
D2 AID1
C1 AID2 NC
D4 AID3 NC
C2 I2CC_SDA
C3 I2CC_SCL
F6 I2C_IRQ2*
F5 I2C_IRQ1*
E4 SPI_CLK
E2 SPI_CIPO
E3 SPI_COPI
E1 SPI_CSZ
F1 SPMI_I2C2_DATA
F2 SPMI_I2C2_CLK
C6 STRAP0_BUSPOWER
E7 STRAP1_I2C_SPMI_SEL
E6 STRAP2_DFU_EN
E8 STRAP3_I2C_ADDR0
E9 STRAP4_I2C_ADDR1
D6 STRAP5_VDDIO_CFG
H6 R_OSC
27 35 39 96 102 504 PP1V24_S2
117S00088 R9620 1.8K 5% 1/32W TK 1005 ROOM=E85_ACE
117S00088 R9621 1.8K 5% 1/32W TK 1005 ROOM=E85_ACE
97 128 IO_E85_AID0_BI_MOGUL
117 118 IO_ACE_TO_TOUCH_AID
99 I2CC_ACE_BI_PARROT_SDA
99 I2CC_ACE_TO_PARROT_SCL
note: IRQ1/2 swapped
IRQ1/2: D8X = nc, D3Y = TBD
144 NC_IO_ACE_IRQ2_L
144 NC_IO_ACE_IRQ1_L
97 126 SPI_ACE_TO_FLASH_CLK_3V3
97 126 SPI_ACE_FROM_FLASH_CIPO_3V3
97 126 SPI_ACE_TO_FLASH_COPI_3V3
97 126 SPI_ACE_TO_FLASH_CS_L_3V3
144 SPMI_A0_NUB_BI_ACE_DATA
144 SPMI_A0_NUB_TO_ACE_CLK
96 97 PP3V3_LDO_E85
144 GND
36 96 IO_PMU_TO_ACE_DFU_EN
103S00764 R9602 15K 0.1% 1/32W TK 1005 ROOM=E85_ACE
IO_ACE_OSC
L3 GPIO0 GPIO_ACE_DEBUG_GPIO0_3V3 103 128
L4 GPIO1 IO_PMU_TO_MANY_ACTIVE_READY
K3 GPIO2 IO_SOC_DFU_STATUS
K2 GPIO3 IO_SOC_FROM_PMU_ACE_FORCE_DFU 10 126
J3 GPIO4 IO_NUB_FROM_ACE_DOCK_CONNECT 15
H4 GPIO5 NC
H3 GPIO6_OD_5V IO_ACE_TO_CHARGER_VBUS1_VALID_L_HV_R
J4 GPIO7 GPIO_ACE_TO_AGAMA_EN_3V3 98
J2 GPIO8 GPIO0_PARROT_TO_ACE3_SPARE 96 99
G2 GPIO9 NC
G3 GPIO10 GPIO_ACE_FROM_PARROT_INT_L 99 128
B4 GPIO11 GPIO_ACE_TO_E85_CON_DETECT_L
B5 GPIO12 IO_E85_TO_ACE_CON_DETECT_IN_L
D5 GPIO14_MRESET IO_ACE_MRESET_L 96
C5 GPIO13_HPDTXRX GPIO_13_ACE 96
A5 GPIO15_RESETZ IO_ACE_TO_PARROT_RESET_L 99
A4 GPIO16_DFU_BOOTED_L GPIO_AP_FROM_ACE_DFU_BOOTED_L 26
A3 GPIO17_FORCE_RST_REQ IO_PMU_FROM_ACE_RESET 36
B3 GPIO21 GPIO_21_ACE
G1 I2C1_SCL_GPIO22 TP_ACE_I2C1_SCL_GPIO22 126
H1 I2C1_SDA_GPIO23 TP_ACE_I2C1_SDA_GPIO23 126
H10 DEBUG0_GPIO24 SWD_SOC_FROM_ACE_SWCLK 15 128
H9 DEBUG1_GPIO25 SWD_SOC_BI_ACE_SWDIO 15 128
H5 DEBUG2_GPIO26 UART0_AP_TO_ACE_DEBUG_TXD 27 126
G5 DEBUG3_GPIO27 UART0_AP_FROM_ACE_DEBUG_RXD 27 126
K5 DEBUG4_GPIO28 GPIO_28_ACE
J5 DEBUG5_GPIO29 GPIO_29_ACE
L5 DEBUG6_GPIO30 NC
L6 DEBUG7_GPIO31 NC
note: gpio 13 and 14 are swapped
: 101506734 for 10k PD
R9618 1K 1% 1/32W TK 01005-1 ROOM=E85_ACE 117S00063
IO_ACE_TO_CHARGER_VBUS1_VALID_L_HV 40 126
R9612 681 1% 1/32W TK 1005 ROOM=E85_ACE 118S00610
117S00034 R9611 68 5% 1/32W TK 1005 ROOM=E85_ACE
IO_E85_TO_ACE_CON_DETECT_L_CONN 126 180 505
131S00057 C9610 100PF 5% 35V NP0-C0G 1005 ROOM=E85_ACE
117S00065 R9601 100K 5% 1/32W TK 1005 ROOM=E85_ACE
117S00065 R9630 100K 5% TK 1/32W 1005 ROOM=E85_ACE
117S00064 R9609 10K 5% 1/32W TK 01005-1 ROOM=E85_ACE
998-2002 XW9607 SHORT-01005 ROOM=E85_ACE
AMUX_PMU_AY 36 127
998-2002 XW9608 SHORT-01005 ROOM=E85_ACE
AMUX_PMU_BY 36 127
96 IO_ACE_MRESET_L
117S00065 R9606 100K 5% 1/32W TK 1005 ROOM=E85_ACE
96 99 GPIO0_PARROT_TO_ACE3_SPARE
117S00065 R9615 100K 5% 1/32W TK 1005 ROOM=E85_ACE
96 GPIO_13_ACE
117S00065 R9614 100K 5% 1/32W TK 1005 ROOM=E85_ACE

PAGE TITLE

E85: Controller (2/2) (96)

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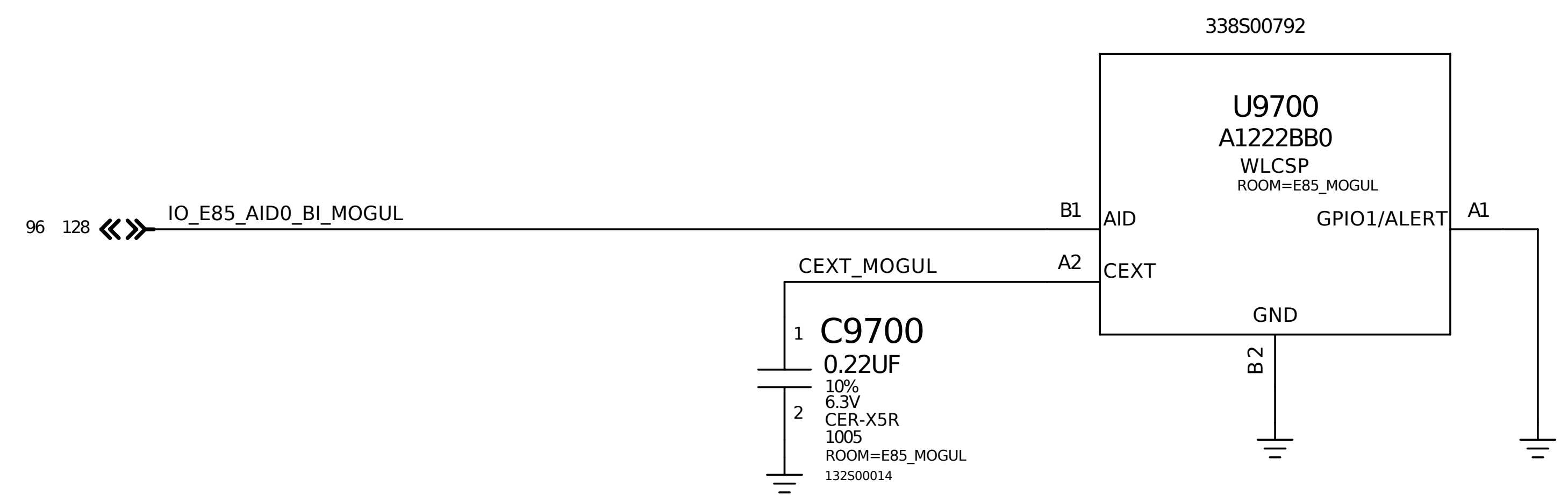
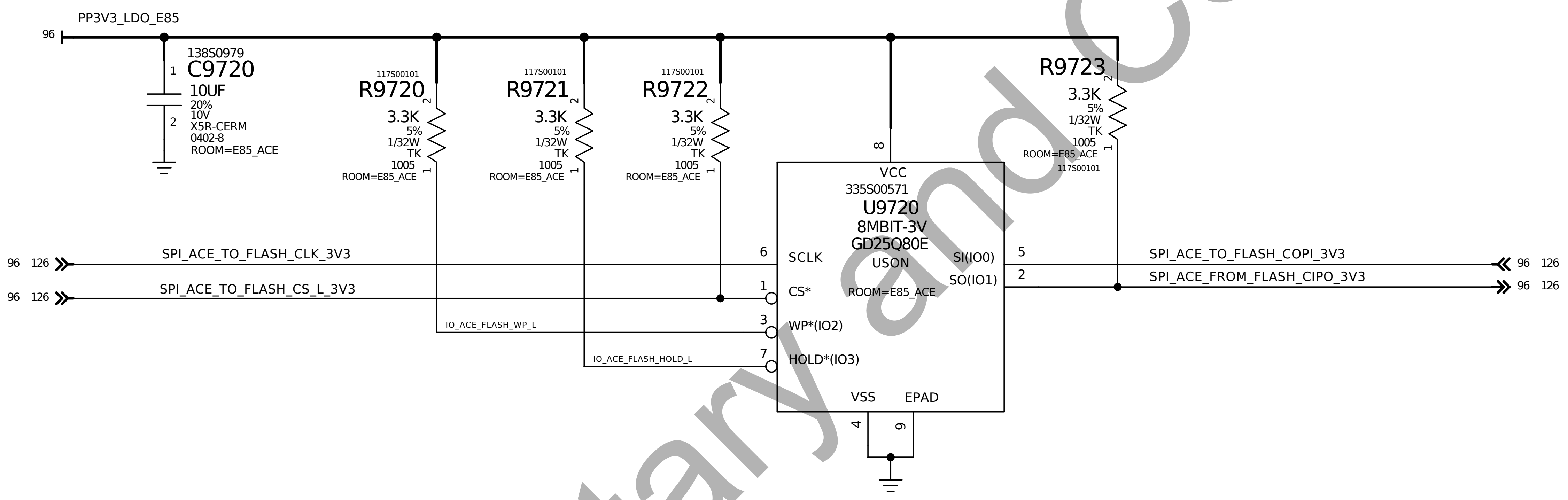

338S00792
U9700
A1222BB0
WLCSP
ROOM=E85_MOGUL
96 128
IO_E85_AID0_BI_MOGUL
B1
AID
A2
CEXT
CEXT_MOGUL
GPIO1/ALERT
A1
GND
B2
C9700
1
2
0.22UF
10%
6.3V
CER-X5R
1005
ROOM=E85_MOGUL
132S00014

FLASH


96
PP3V3_LDO_E85
138S0979
C9720
1
2
10UF
20%
10V
X5R-CERM
0402-8
ROOM=E85_ACE
117S00101
R9720
3.3K
5%
1/32W
TK
1005
ROOM=E85_ACE
117S00101
R9721
3.3K
5%
1/32W
TK
1005
ROOM=E85_ACE
117S00101
R9722
3.3K
5%
1/32W
TK
1005
ROOM=E85_ACE
R9723
3.3K
5%
1/32W
TK
1005
ROOM=E85_ACE
117S00101
8
VCC
335S00571
U9720
8MBIT-3V
GD25Q80E
USON
ROOM=E85_ACE
96 126
SPI_ACE_TO_FLASH_CLK_3V3
6
SCLK
96 126
SPI_ACE_TO_FLASH_CS_L_3V3
1
CS*
IO_ACE_FLASH_WP_L
3
WP*(IO2)
IO_ACE_FLASH_HOLD_L
7
HOLD*(IO3)
VSS
EPAD
4
9
5
SI(IO0)
SPI_ACE_TO_FLASH_COPI_3V3
96 126
2
SO(IO1)
SPI_ACE_FROM_FLASH_CIPO_3V3
96 126

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
335S00644	335S00571	U9720	IC,SPI SERIAL FLASH,8MBITS,3.0V,USON8

PAGE TITLE
Flash (97)

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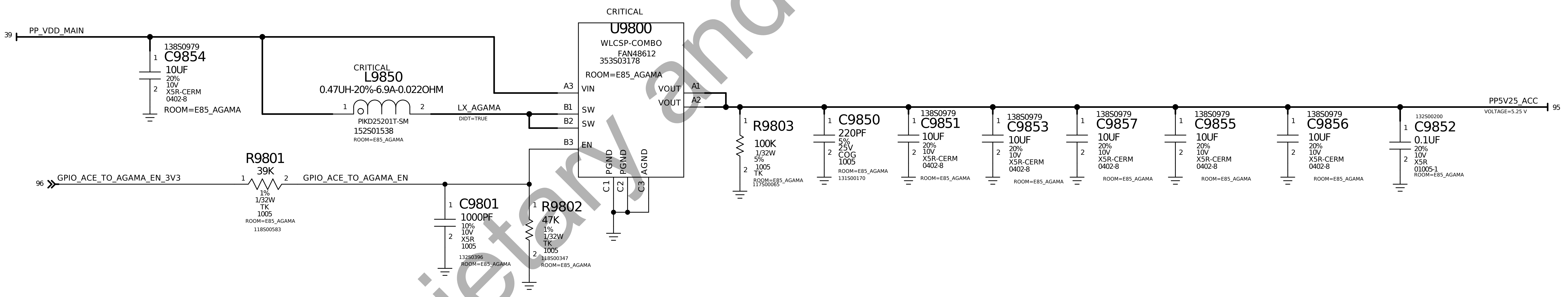
SUBSYSTEM SPECIFIC BOM TABLES

ACCESSORY POWER


39
PP_VDD_MAIN
138S0979
C9854
10UF
20%
10V
X5R-CERM
0402-8
ROOM=E85_AGAMA
CRITICAL
L9850
0.47UH-20%-6.9A-0.022OHM
PIKD25201T-SM
152S01538
ROOM=E85_AGAMA
LX_AGAMA
DIDT=TRUE
CRITICAL
U9800
WLCSP-COMBO
FAN48612
353S03178
ROOM=E85_AGAMA
A3 VIN
B1 SW
B2 SW
B3 EN
A1 VOUT
A2 VOUT
C1 PGND
C2 PGND
C3 AGND
96
GPIO_ACE_TO_AGAMA_EN_3V3
R9801
39K
1%
1/32W
TK
1005
ROOM=E85_AGAMA
118S00583
GPIO_ACE_TO_AGAMA_EN
C9801
1000PF
10%
10V
X5R
1005
132S0396
ROOM=E85_AGAMA
R9802
47K
1%
1/32W
TK
1005
118S00347
ROOM=E85_AGAMA
R9803
100K
1/32W
5%
1005
TK
ROOM=E85_AGAMA
117S00065
C9850
220PF
5%
25V
COG
1005
ROOM=E85_AGAMA
131S00170
138S0979
C9851
10UF
20%
10V
X5R-CERM
0402-8
ROOM=E85_AGAMA
138S0979
C9853
10UF
20%
10V
X5R-CERM
0402-8
ROOM=E85_AGAMA
138S0979
C9857
10UF
20%
10V
X5R-CERM
0402-8
ROOM=E85_AGAMA
138S0979
C9855
10UF
20%
10V
X5R-CERM
0402-8
ROOM=E85_AGAMA
138S0979
C9856
10UF
20%
10V
X5R-CERM
0402-8
ROOM=E85_AGAMA
132S00200
C9852
0.1UF
20%
10V
X5R
01005-1
ROOM=E85_AGAMA
PP5V25_ACC
VOLTAGE=5.25 V
95

PAGE TITLE

Accessory Power (98)

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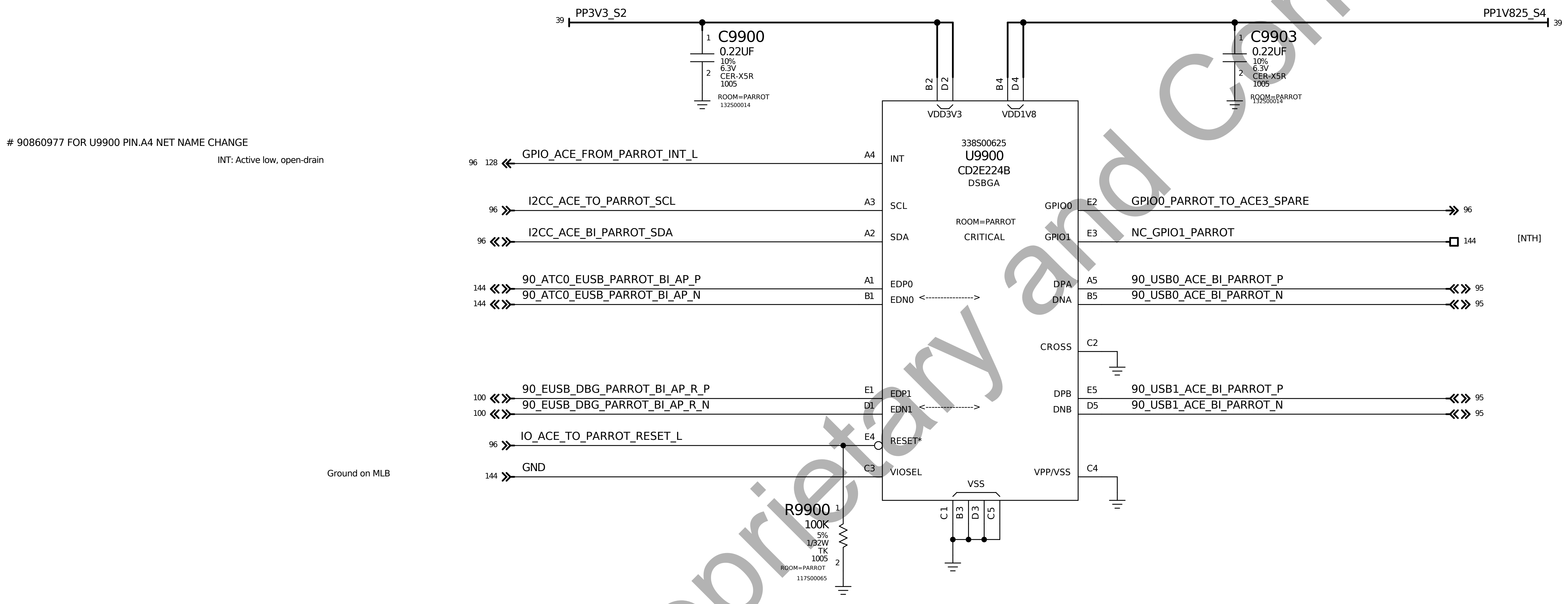
USB REPEATER



PP3V3_S2
39
C9900
0.22UF
10%
6.3V
CER-X5R
1005
ROOM=PARROT
132S00014
PP1V825_S4
39
C9903
0.22UF
10%
6.3V
CER-X5R
1005
ROOM=PARROT
132S00014
B2
D2
B4
D4
VDD3V3
VDD1V8
338S00625
U9900
CD2E224B
DSBGA
ROOM=PARROT
CRITICAL
# 90860977 FOR U9900 PIN.A4 NET NAME CHANGE
INT: Active low, open-drain
96 128
GPIO_ACE_FROM_PARROT_INT_L
A4
INT
96
I2CC_ACE_TO_PARROT_SCL
A3
SCL
96
I2CC_ACE_BI_PARROT_SDA
A2
SDA
144
90_ATC0_EUSB_PARROT_BI_AP_P
A1
EDP0
144
90_ATC0_EUSB_PARROT_BI_AP_N
B1
EDN0
<---------------->
100
90_EUSB_DBG_PARROT_BI_AP_R_P
E1
EDP1
100
90_EUSB_DBG_PARROT_BI_AP_R_N
D1
EDN1
<---------------->
96
IO_ACE_TO_PARROT_RESET_L
E4
RESET*
Ground on MLB
144
GND
C3
VIOSEL
GPIO0
E2
GPIO0_PARROT_TO_ACE3_SPARE
96
GPIO1
E3
NC_GPIO1_PARROT
144
[NTH]
DPA
A5
90_USB0_ACE_BI_PARROT_P
95
DNA
B5
90_USB0_ACE_BI_PARROT_N
95
CROSS
C2
DPB
E5
90_USB1_ACE_BI_PARROT_P
95
DNB
D5
90_USB1_ACE_BI_PARROT_N
95
VPP/VSS
C4
VSS
C1
B3
D3
C5
R9900
100K
5%
1/32W
TK
1005
ROOM=PARROT
117S00065
1
2

PAGE TITLE

eUSB (99)

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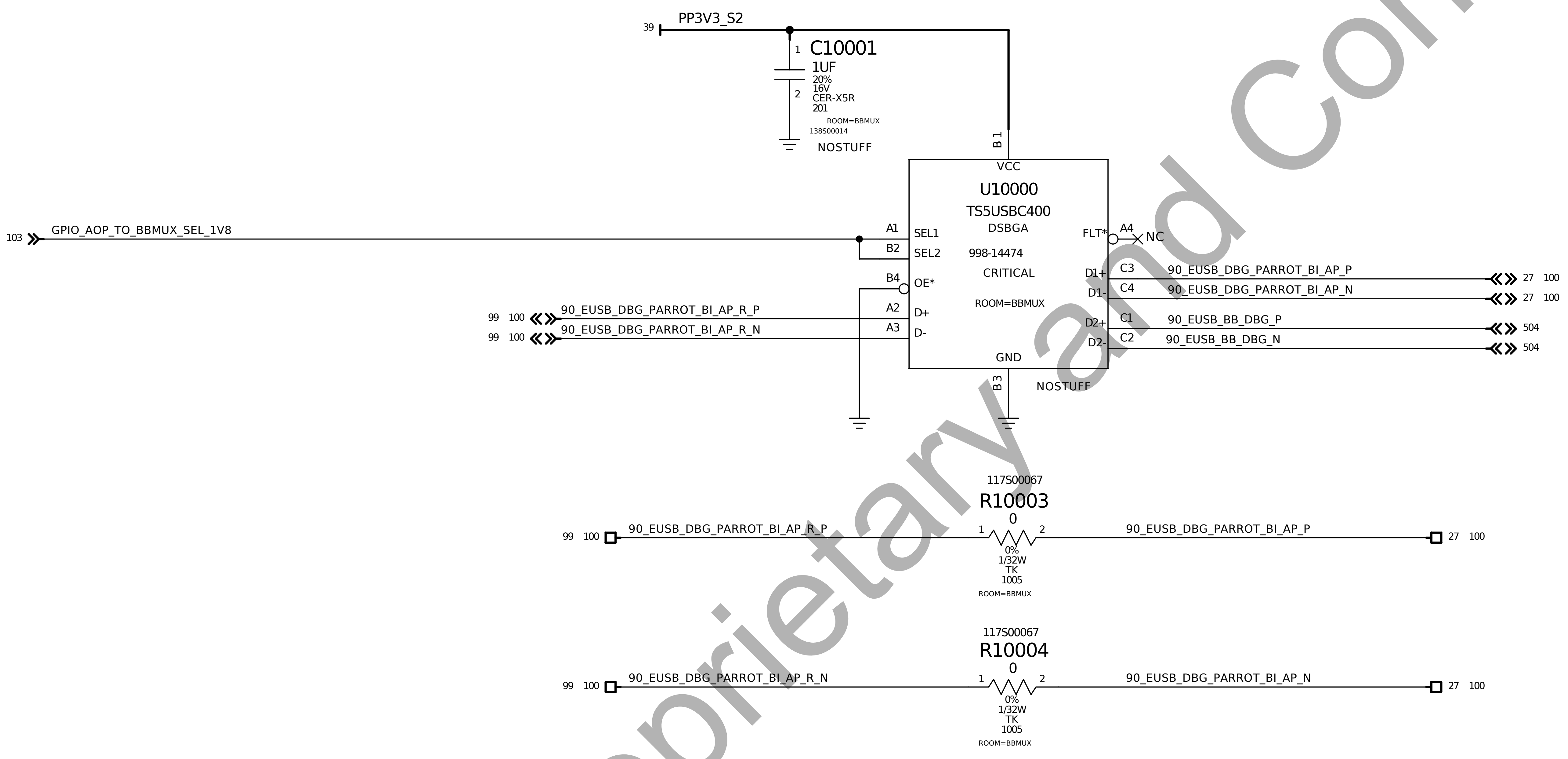
BB USB MUX


39
PP3V3_S2
C10001
1
2
1UF
20%
16V
CER-X5R
201
ROOM=BBMUX
138S00014
NOSTUFF
B1
VCC
U10000
TS5USBC400
DSBGA
998-14474
CRITICAL
ROOM=BBMUX
103
GPIO_AOP_TO_BBMUX_SEL_1V8
A1
SEL1
B2
SEL2
B4
OE*
A2
D+
A3
D-
99 100
90_EUSB_DBG_PARROT_BI_AP_R_P
99 100
90_EUSB_DBG_PARROT_BI_AP_R_N
FLT*
A4
NC
D1+
C3
90_EUSB_DBG_PARROT_BI_AP_P
27 100
D1-
C4
90_EUSB_DBG_PARROT_BI_AP_N
27 100
D2+
C1
90_EUSB_BB_DBG_P
504
D2-
C2
90_EUSB_BB_DBG_N
504
GND
B3
NOSTUFF
117S00067
R10003
0
1
2
0%
1/32W
TK
1005
ROOM=BBMUX
99 100
90_EUSB_DBG_PARROT_BI_AP_R_P
90_EUSB_DBG_PARROT_BI_AP_P
27 100
117S00067
R10004
0
1
2
0%
1/32W
TK
1005
ROOM=BBMUX
99 100
90_EUSB_DBG_PARROT_BI_AP_R_N
90_EUSB_DBG_PARROT_BI_AP_N
27 100

PAGE TITLE

USB Mux (100)

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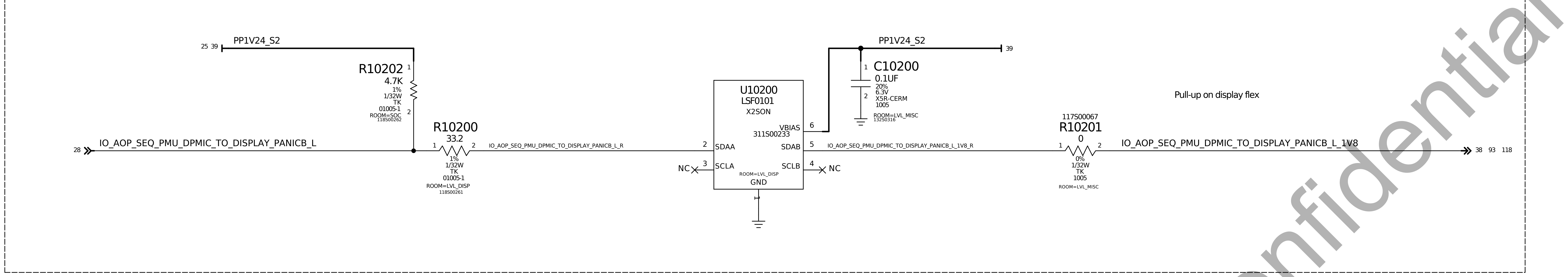
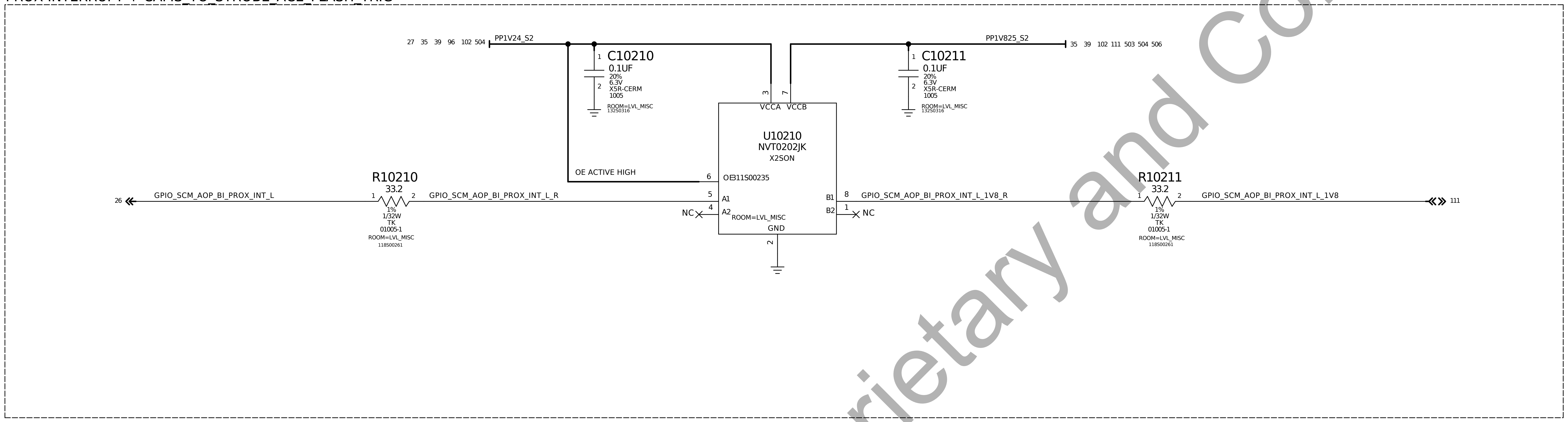
LEVEL TRANSLATORS

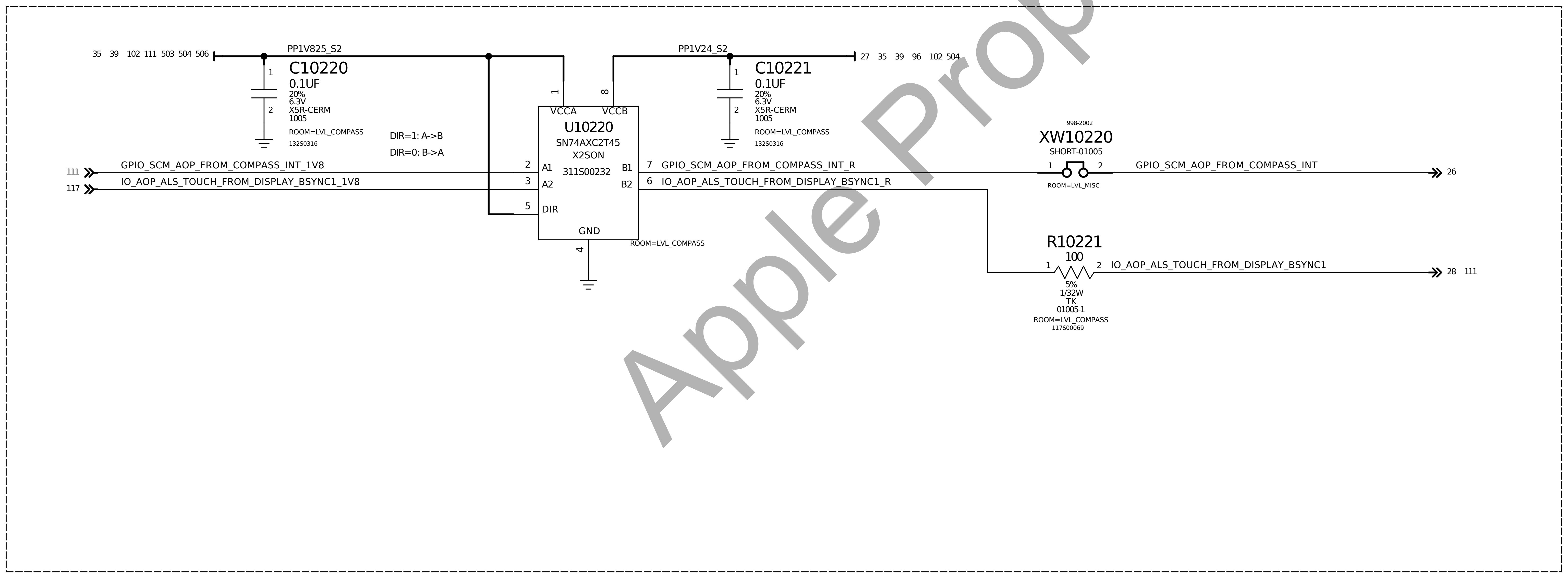
PANICB


25 39
PP1V24_S2
R10202
4.7K
1%
1/32W
TK
01005-1
ROOM=SOC
118S00262
28
IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L
R10200
33.2
1%
1/32W
TK
01005-1
ROOM=LVL_DISP
118S00261
IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L_R
U10200
LSF0101
X2SON
311S00233
VBIAS
SDAA
SDAB
SCLA
SCLB
NC
NC
ROOM=LVL_DISP
GND
PP1V24_S2
39
C10200
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=LVL_MISC
132S0316
IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L_1V8_R
Pull-up on display flex
117S00067
R10201
0
0%
1/32W
TK
1005
ROOM=LVL_MISC
IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L_1V8
38 93 118

PROX INTERRUPT + CAMS_TO_STROBE_ACE_FLASH_TRIG


27 35 39 96 102 504
PP1V24_S2
C10210
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=LVL_MISC
132S0316
VCCA VCCB
U10210
NVT0202JK
X2SON
OE ACTIVE HIGH
OE 311S00235
A1
A2
B1
B2
NC
NC
ROOM=LVL_MISC
GND
PP1V825_S2
35 39 102 111 503 504 506
C10211
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=LVL_MISC
132S0316
26
GPIO_SCM_AOP_BI_PROX_INT_L
R10210
33.2
1%
1/32W
TK
01005-1
ROOM=LVL_MISC
118S00261
GPIO_SCM_AOP_BI_PROX_INT_L_R
GPIO_SCM_AOP_BI_PROX_INT_L_1V8_R
R10211
33.2
1%
1/32W
TK
01005-1
ROOM=LVL_MISC
118S00261
GPIO_SCM_AOP_BI_PROX_INT_L_1V8
111

DISPLAY BSYNC + COMPASS INTERRUPT


35 39 102 111 503 504 506
PP1V825_S2
C10220
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=LVL_COMPASS
132S0316
DIR=1: A->B
DIR=0: B->A
VCCA VCCB
U10220
SN74AXC2T45
X2SON
311S00232
A1
A2
DIR
B1
B2
GND
ROOM=LVL_COMPASS
PP1V24_S2
27 35 39 96 102 504
C10221
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=LVL_COMPASS
132S0316
111
GPIO_SCM_AOP_FROM_COMPASS_INT_1V8
117
IO_AOP_ALS_TOUCH_FROM_DISPLAY_BSYNC1_1V8
GPIO_SCM_AOP_FROM_COMPASS_INT_R
IO_AOP_ALS_TOUCH_FROM_DISPLAY_BSYNC1_R
998-2002
XW10220
SHORT-01005
ROOM=LVL_MISC
GPIO_SCM_AOP_FROM_COMPASS_INT
26
R10221
100
5%
1/32W
TK
01005-1
ROOM=LVL_COMPASS
117S00069
IO_AOP_ALS_TOUCH_FROM_DISPLAY_BSYNC1
28 111

PAGE TITLE
LVL SHIFT: Misc (102)

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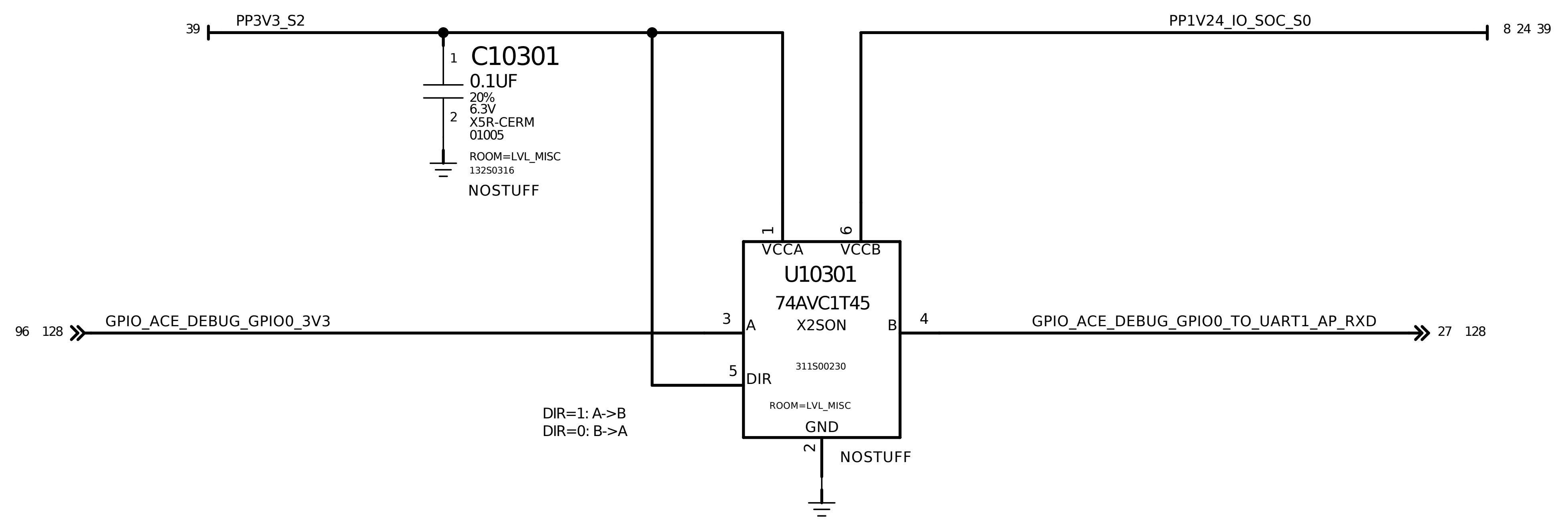
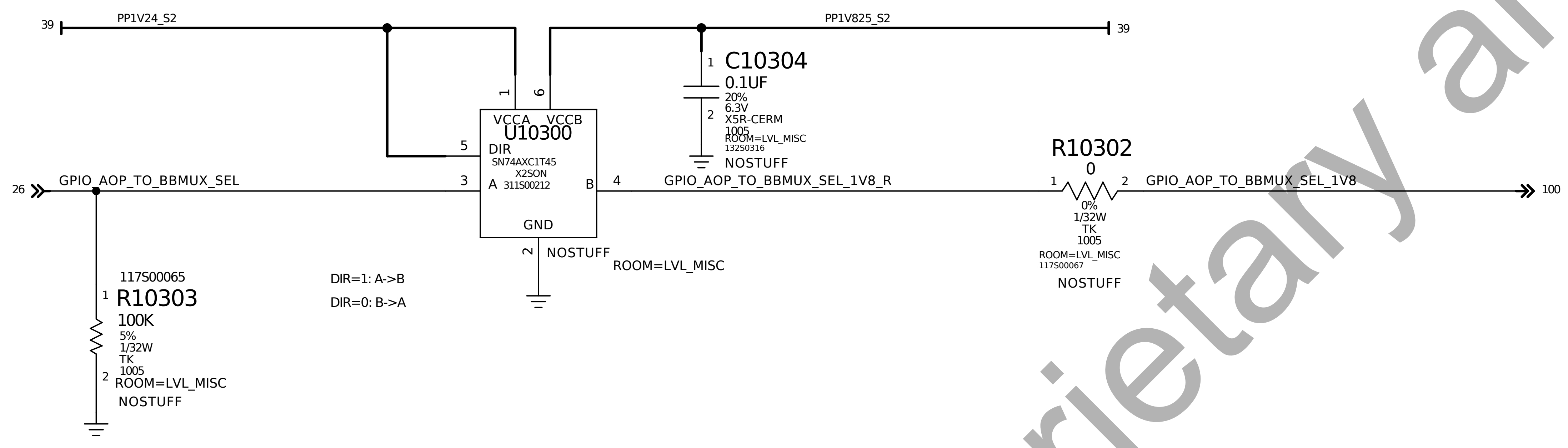
ACE DEBUG GPIO0


39
PP3V3_S2
PP1V24_IO_SOC_S0
8 24 39
C10301
0.1UF
20%
6.3V
X5R-CERM
01005
ROOM=LVL_MISC
132S0316
NOSTUFF
1
2
VCCA
VCCB
6
U10301
74AVC1T45
X2SON
311S00230
ROOM=LVL_MISC
GND
NOSTUFF
96 128
GPIO_ACE_DEBUG_GPIO0_3V3
3
A
5
DIR
B
4
GPIO_ACE_DEBUG_GPIO0_TO_UART1_AP_RXD
27 128
DIR=1: A->B
DIR=0: B->A

BBMUX_SEL


39
PP1V24_S2
PP1V825_S2
39
C10304
0.1UF
20%
6.3V
X5R-CERM
1005
ROOM=LVL_MISC
132S0316
NOSTUFF
1
2
6
VCCA
VCCB
U10300
DIR
5
SN74AXC1T45
X2SON
311S00212
3
A
B
4
GND
NOSTUFF
ROOM=LVL_MISC
26
GPIO_AOP_TO_BBMUX_SEL
GPIO_AOP_TO_BBMUX_SEL_1V8_R
R10302
0
0%
1/32W
TK
1005
ROOM=LVL_MISC
117S00067
NOSTUFF
GPIO_AOP_TO_BBMUX_SEL_1V8
100
117S00065
R10303
100K
5%
1/32W
TK
1005
ROOM=LVL_MISC
NOSTUFF
DIR=1: A->B
DIR=0: B->A

PAGE TITLE

LVL SHIFT: Misc Nets (103)

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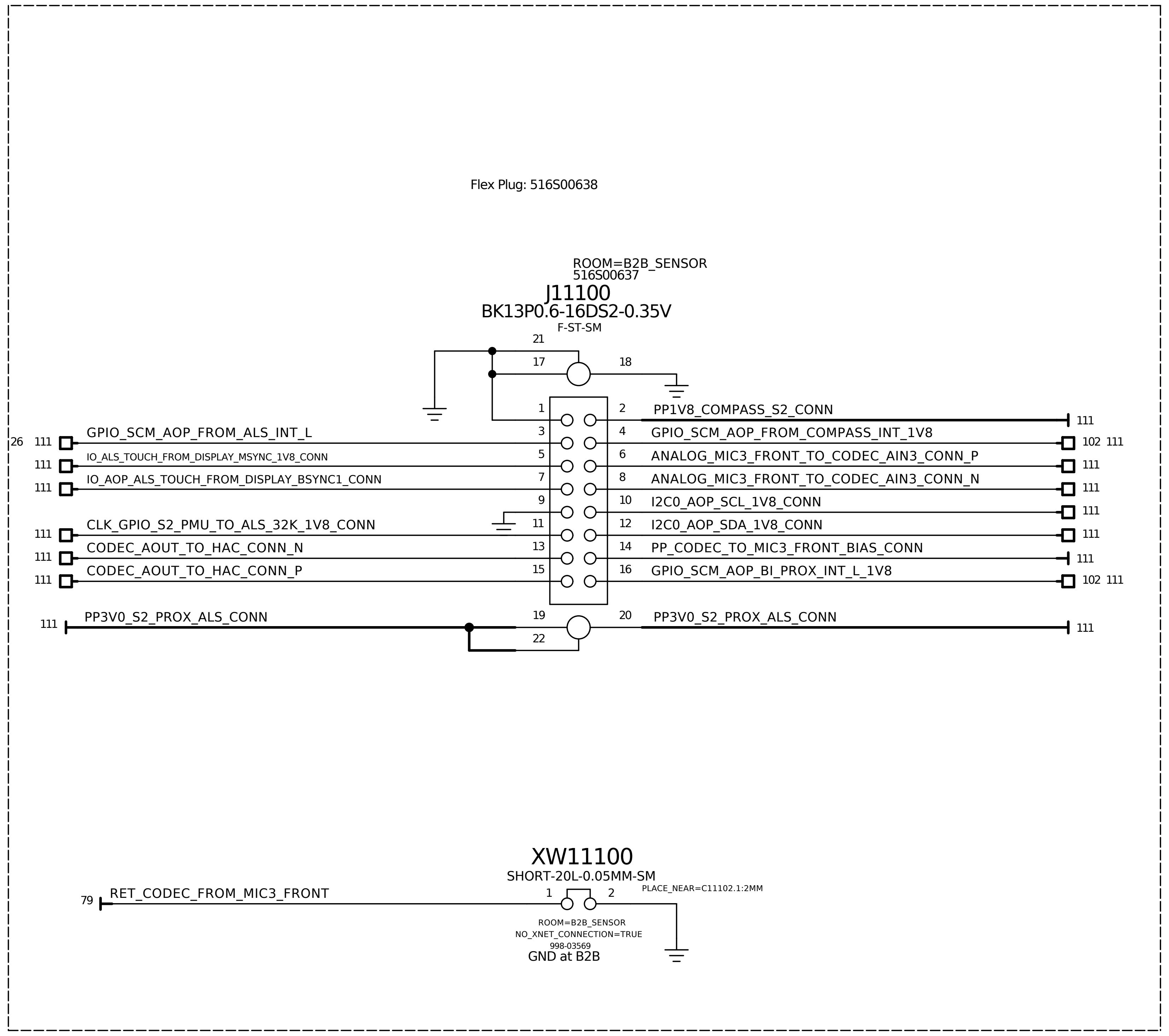
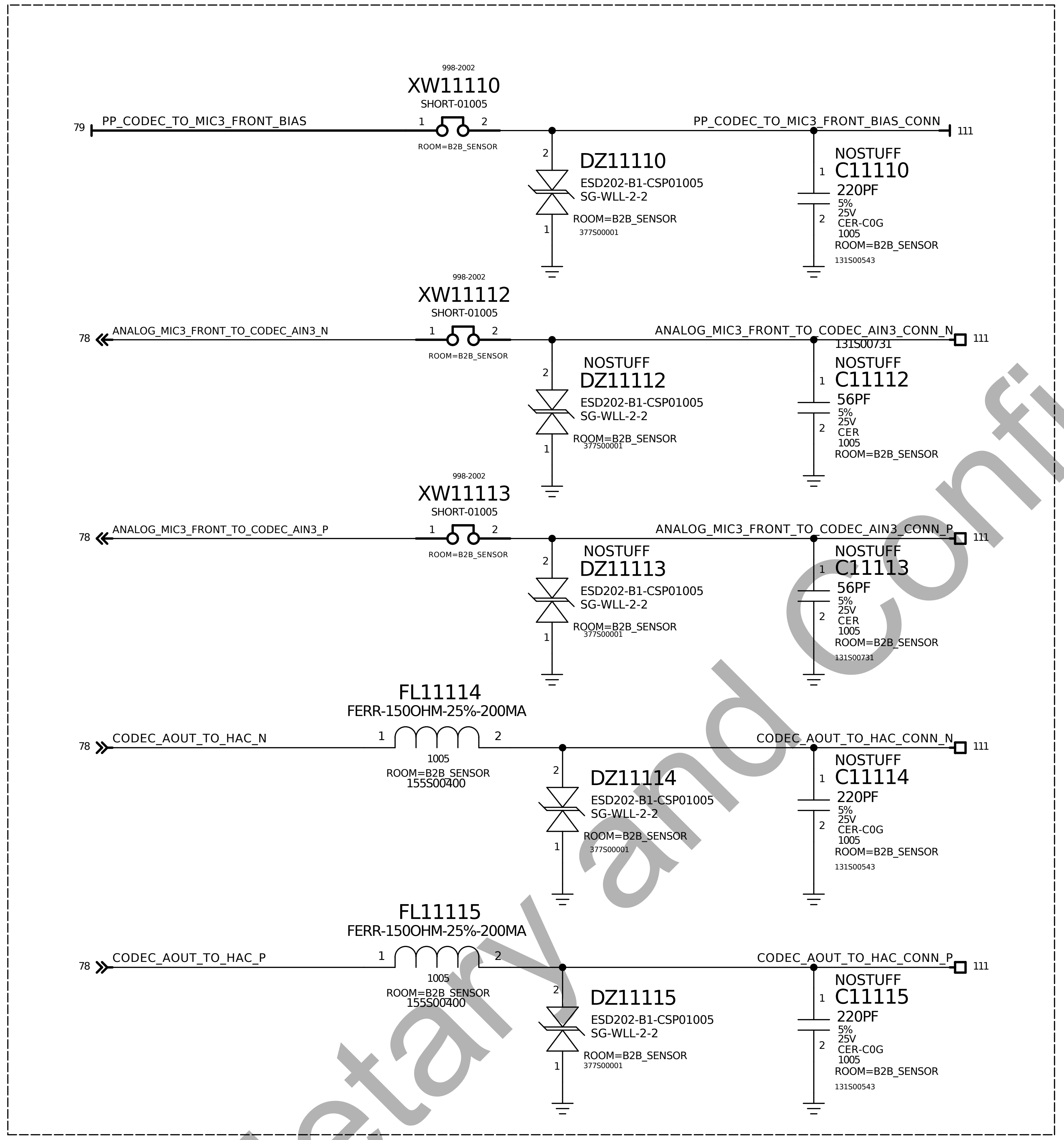
SENSOR B2B

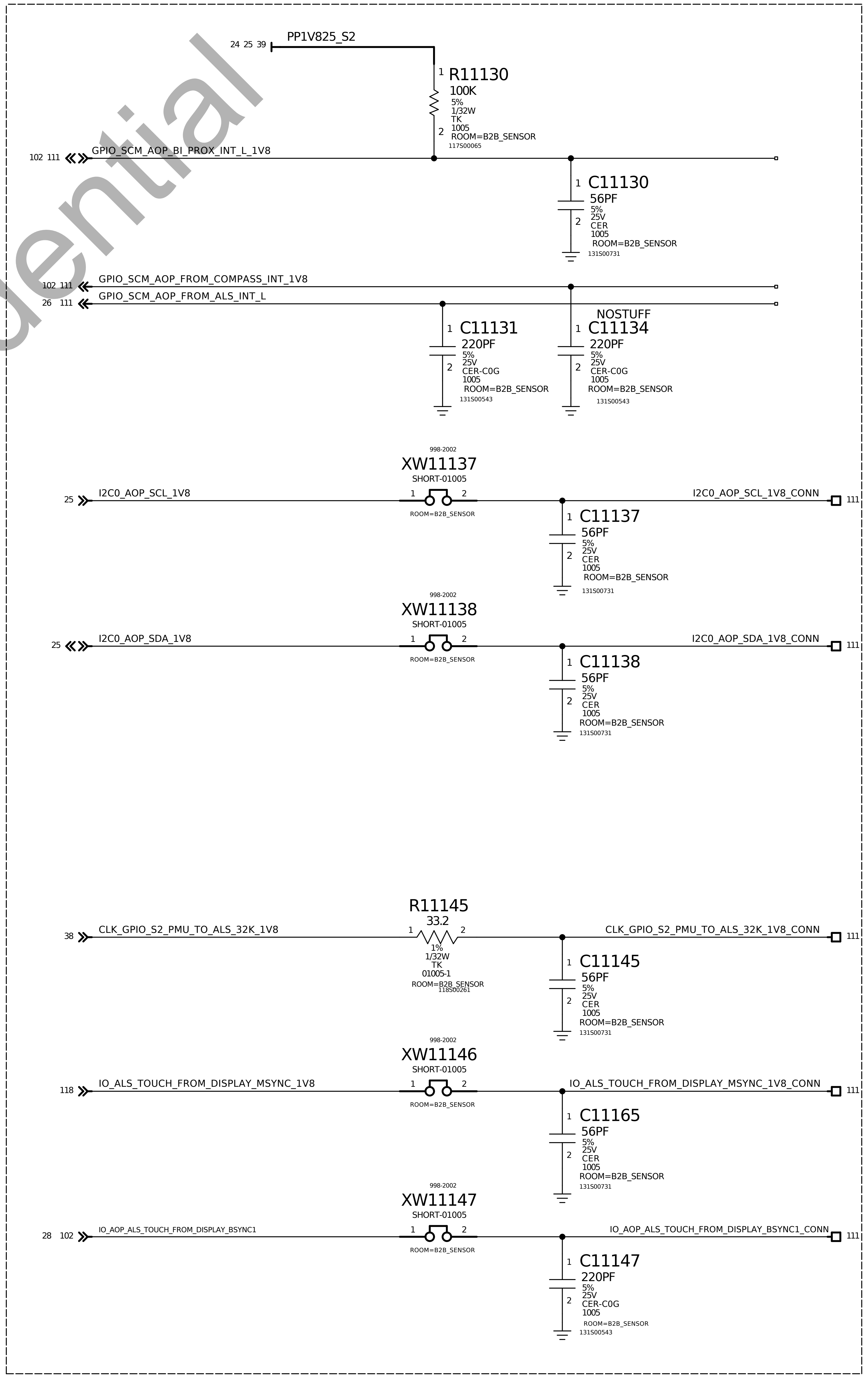
CONNECTOR


Flex Plug: 516S00638
ROOM=B2B_SENSOR
516S00637
J11100
BK13P0.6-16DS2-0.35V
F-ST-SM
GPIO_SCM_AOP_FROM_ALS_INT_L
IO_ALS_TOUCH_FROM_DISPLAY_MSYNC_1V8_CONN
IO_AOP_ALS_TOUCH_FROM_DISPLAY_BSYNC1_CONN
CLK_GPIO_S2_PMU_TO_ALS_32K_1V8_CONN
CODEC_AOUT_TO_HAC_CONN_N
CODEC_AOUT_TO_HAC_CONN_P
PP1V8_COMPASS_S2_CONN
GPIO_SCM_AOP_FROM_COMPASS_INT_1V8
ANALOG_MIC3_FRONT_TO_CODEC_AIN3_CONN_P
ANALOG_MIC3_FRONT_TO_CODEC_AIN3_CONN_N
I2C0_AOP_SCL_1V8_CONN
I2C0_AOP_SDA_1V8_CONN
PP_CODEC_TO_MIC3_FRONT_BIAS_CONN
GPIO_SCM_AOP_BI_PROX_INT_L_1V8
PP3V0_S2_PROX_ALS_CONN
PP3V0_S2_PROX_ALS_CONN
XW11100
SHORT-20L-0.05MM-SM
PLACE_NEAR=C11102.1:2MM
RET_CODEC_FROM_MIC3_FRONT
ROOM=B2B_SENSOR
NO_XNET_CONNECTION=TRUE
998-03569
GND at B2B

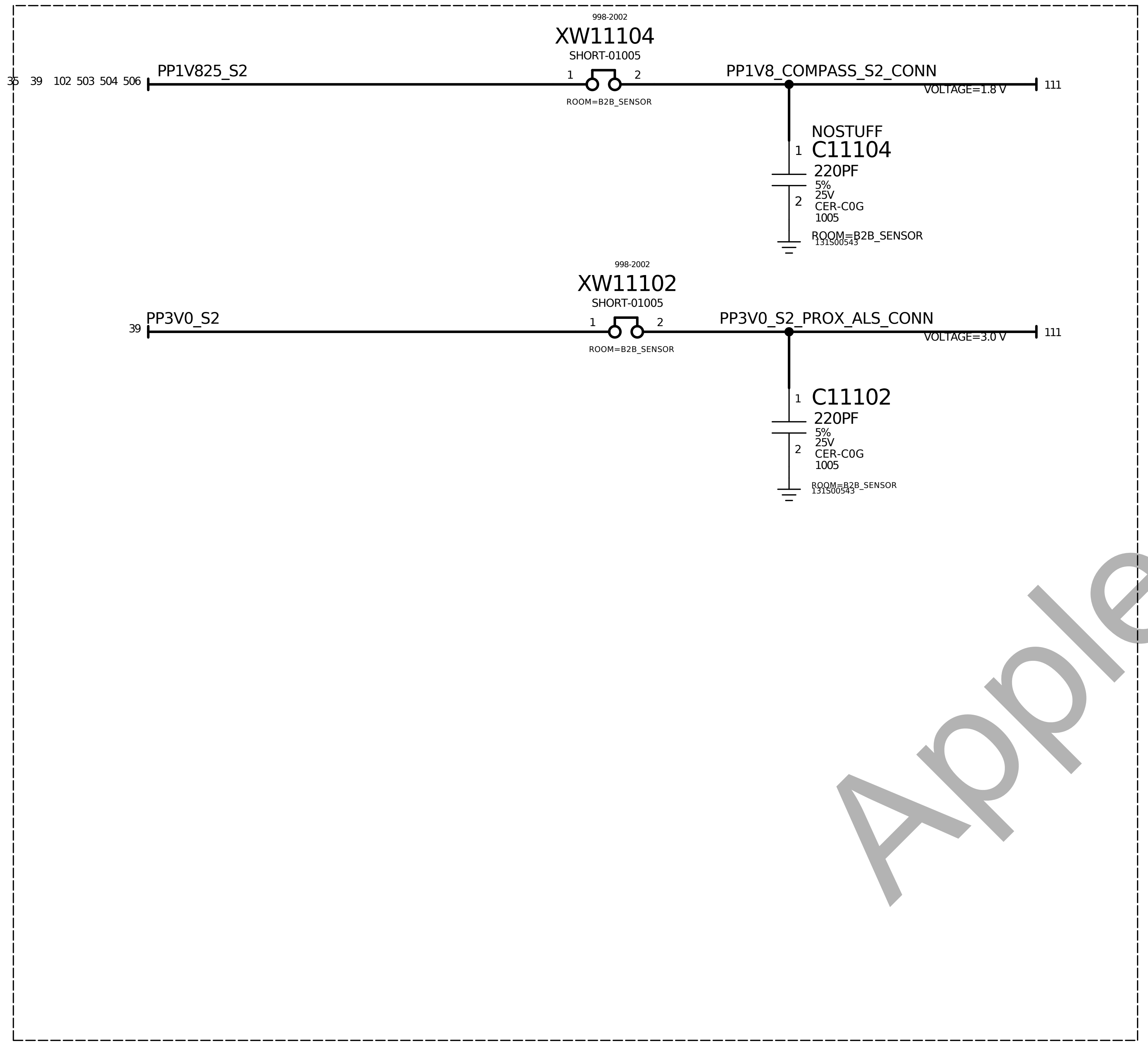
MIC3


998-2002
XW11110
SHORT-01005
PP_CODEC_TO_MIC3_FRONT_BIAS
PP_CODEC_TO_MIC3_FRONT_BIAS_CONN
ROOM=B2B_SENSOR
DZ11110
ESD202-B1-CSP01005
SG-WLL-2-2
ROOM=B2B_SENSOR
377S00001
NOSTUFF
C11110
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_SENSOR
131S00543
998-2002
XW11112
SHORT-01005
ANALOG_MIC3_FRONT_TO_CODEC_AIN3_N
ANALOG_MIC3_FRONT_TO_CODEC_AIN3_CONN_N
131S00731
NOSTUFF
DZ11112
ESD202-B1-CSP01005
SG-WLL-2-2
NOSTUFF
C11112
56PF
5%
25V
CER
1005
ROOM=B2B_SENSOR
998-2002
XW11113
SHORT-01005
ANALOG_MIC3_FRONT_TO_CODEC_AIN3_P
ANALOG_MIC3_FRONT_TO_CODEC_AIN3_CONN_P
NOSTUFF
DZ11113
ESD202-B1-CSP01005
SG-WLL-2-2
NOSTUFF
C11113
56PF
5%
25V
CER
1005
ROOM=B2B_SENSOR
131S00731
FL11114
FERR-150OHM-25%-200MA
CODEC_AOUT_TO_HAC_N
CODEC_AOUT_TO_HAC_CONN_N
1005
ROOM=B2B_SENSOR
155S00400
DZ11114
ESD202-B1-CSP01005
SG-WLL-2-2
NOSTUFF
C11114
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_SENSOR
131S00543
FL11115
FERR-150OHM-25%-200MA
CODEC_AOUT_TO_HAC_P
CODEC_AOUT_TO_HAC_CONN_P
1005
ROOM=B2B_SENSOR
155S00400
DZ11115
ESD202-B1-CSP01005
SG-WLL-2-2
NOSTUFF
C11115
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_SENSOR
131S00543

IO FILTERS


PP1V825_S2
R11130
100K
5%
1/32W
TK
1005
ROOM=B2B_SENSOR
117S00065
GPIO_SCM_AOP_BI_PROX_INT_L_1V8
C11130
56PF
5%
25V
CER
1005
ROOM=B2B_SENSOR
131S00731
GPIO_SCM_AOP_FROM_COMPASS_INT_1V8
GPIO_SCM_AOP_FROM_ALS_INT_L
C11131
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_SENSOR
131S00543
NOSTUFF
C11134
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_SENSOR
131S00543
998-2002
XW11137
SHORT-01005
I2C0_AOP_SCL_1V8
I2C0_AOP_SCL_1V8_CONN
C11137
56PF
998-2002
XW11138
SHORT-01005
I2C0_AOP_SDA_1V8
I2C0_AOP_SDA_1V8_CONN
C11138
56PF
R11145
33.2
1%
1/32W
TK
01005-1
ROOM=B2B_SENSOR
118S00261
CLK_GPIO_S2_PMU_TO_ALS_32K_1V8
CLK_GPIO_S2_PMU_TO_ALS_32K_1V8_CONN
C11145
56PF
998-2002
XW11146
SHORT-01005
IO_ALS_TOUCH_FROM_DISPLAY_MSYNC_1V8
IO_ALS_TOUCH_FROM_DISPLAY_MSYNC_1V8_CONN
C11165
56PF
998-2002
XW11147
SHORT-01005
IO_AOP_ALS_TOUCH_FROM_DISPLAY_BSYNC1
IO_AOP_ALS_TOUCH_FROM_DISPLAY_BSYNC1_CONN
C11147
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_SENSOR
131S00543

POWER FILTERS


998-2002
XW11104
SHORT-01005
PP1V825_S2
PP1V8_COMPASS_S2_CONN
VOLTAGE=1.8 V
ROOM=B2B_SENSOR
NOSTUFF
C11104
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_SENSOR
131S00543
998-2002
XW11102
SHORT-01005
PP3V0_S2
PP3V0_S2_PROX_ALS_CONN
VOLTAGE=3.0 V
ROOM=B2B_SENSOR
C11102
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_SENSOR
131S00543

PAGE TITLE

B2B: Sensor (111)

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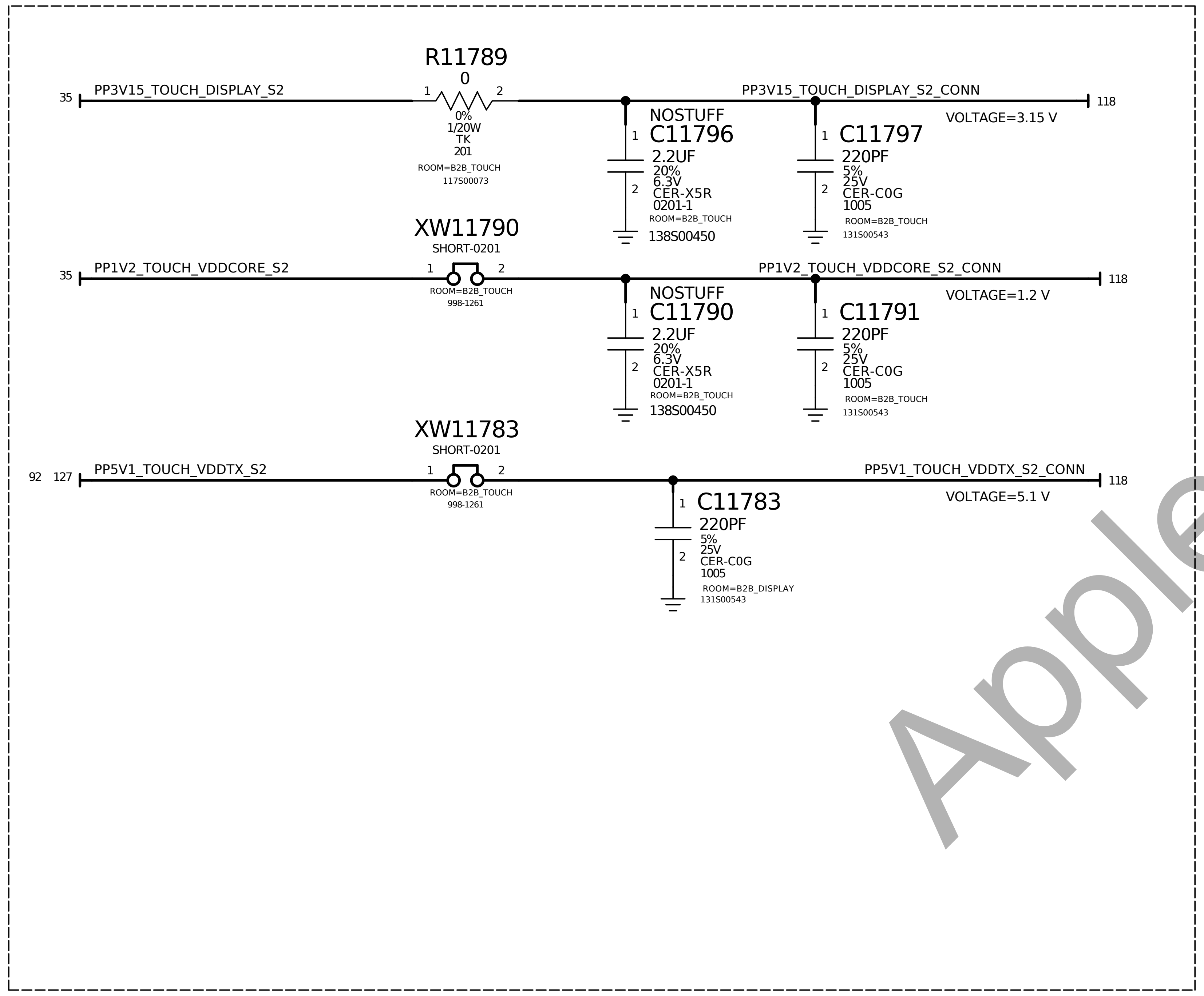
TOUCH B2B

CONNECTOR

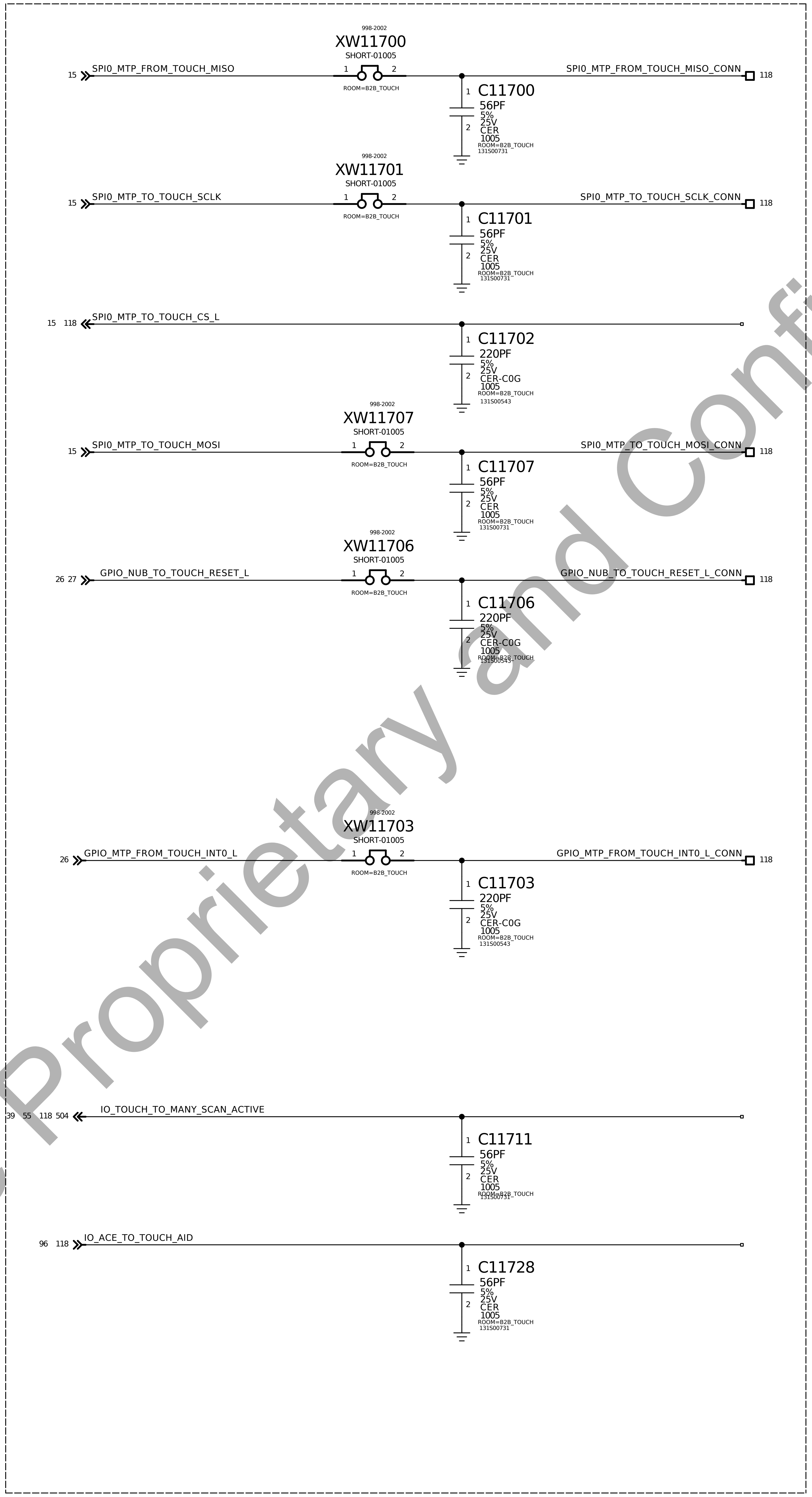
DISPLAY/TOUCH COMBO B2B

MAINTAINED ON NEXT PAGE

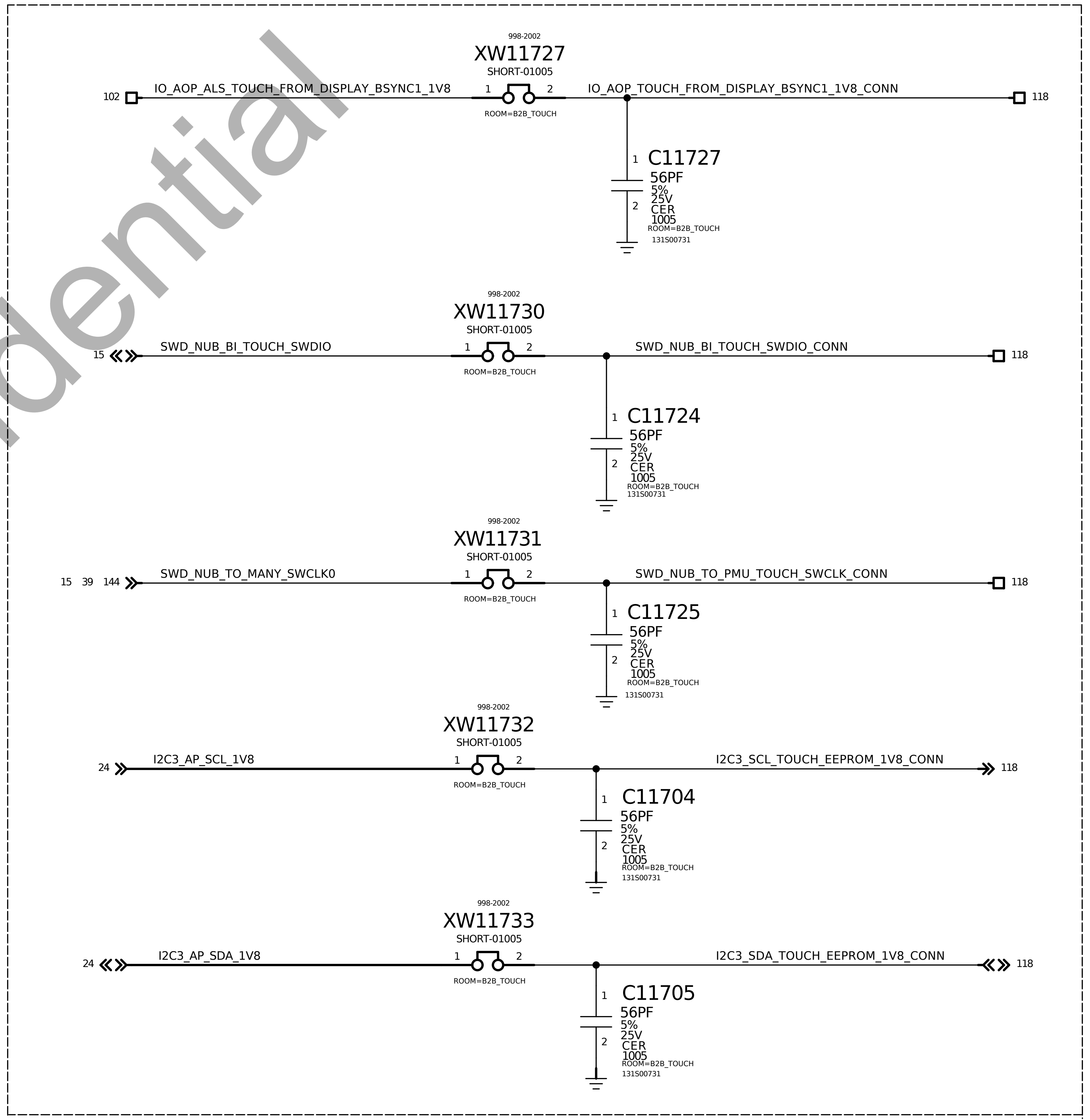
POWER FILTERS


35
PP3V15_TOUCH_DISPLAY_S2
R11789
0
1
2
0%
1/20W
TK
201
ROOM=B2B_TOUCH
117S00073
PP3V15_TOUCH_DISPLAY_S2_CONN
118
VOLTAGE=3.15 V
NOSTUFF
C11796
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=B2B_TOUCH
138S00450
C11797
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_TOUCH
131S00543
XW11790
SHORT-0201
35
PP1V2_TOUCH_VDDCORE_S2
ROOM=B2B_TOUCH
998-1261
PP1V2_TOUCH_VDDCORE_S2_CONN
118
VOLTAGE=1.2 V
NOSTUFF
C11790
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=B2B_TOUCH
138S00450
C11791
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_TOUCH
131S00543
XW11783
SHORT-0201
92 127
PP5V1_TOUCH_VDDTX_S2
ROOM=B2B_TOUCH
998-1261
PP5V1_TOUCH_VDDTX_S2_CONN
118
VOLTAGE=5.1 V
C11783
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_DISPLAY
131S00543

IO FILTERS


998-2002
XW11700
SHORT-01005
15
SPI0_MTP_FROM_TOUCH_MISO
ROOM=B2B_TOUCH
SPI0_MTP_FROM_TOUCH_MISO_CONN
118
C11700
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731
998-2002
XW11701
SHORT-01005
15
SPI0_MTP_TO_TOUCH_SCLK
ROOM=B2B_TOUCH
SPI0_MTP_TO_TOUCH_SCLK_CONN
118
C11701
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731
15 118
SPI0_MTP_TO_TOUCH_CS_L
C11702
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_TOUCH
131S00543
998-2002
XW11707
SHORT-01005
15
SPI0_MTP_TO_TOUCH_MOSI
ROOM=B2B_TOUCH
SPI0_MTP_TO_TOUCH_MOSI_CONN
118
C11707
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731
998-2002
XW11706
SHORT-01005
26 27
GPIO_NUB_TO_TOUCH_RESET_L
ROOM=B2B_TOUCH
GPIO_NUB_TO_TOUCH_RESET_L_CONN
118
C11706
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_TOUCH
131S00543
998-2002
XW11703
SHORT-01005
26
GPIO_MTP_FROM_TOUCH_INT0_L
ROOM=B2B_TOUCH
GPIO_MTP_FROM_TOUCH_INT0_L_CONN
118
C11703
220PF
5%
25V
CER-C0G
1005
ROOM=B2B_TOUCH
131S00543
36 39 55 118 504
IO_TOUCH_TO_MANY_SCAN_ACTIVE
C11711
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731
96 118
IO_ACE_TO_TOUCH_AID
C11728
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731

IO FILTERS (cont)


998-2002
XW11727
SHORT-01005
102
IO_AOP_ALS_TOUCH_FROM_DISPLAY_BSYNC1_1V8
ROOM=B2B_TOUCH
IO_AOP_TOUCH_FROM_DISPLAY_BSYNC1_1V8_CONN
118
C11727
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731
998-2002
XW11730
SHORT-01005
15
SWD_NUB_BI_TOUCH_SWDIO
ROOM=B2B_TOUCH
SWD_NUB_BI_TOUCH_SWDIO_CONN
118
C11724
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731
998-2002
XW11731
SHORT-01005
15 39 144
SWD_NUB_TO_MANY_SWCLK0
ROOM=B2B_TOUCH
SWD_NUB_TO_PMU_TOUCH_SWCLK_CONN
118
C11725
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731
998-2002
XW11732
SHORT-01005
24
I2C3_AP_SCL_1V8
ROOM=B2B_TOUCH
I2C3_SCL_TOUCH_EEPROM_1V8_CONN
118
C11704
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731
998-2002
XW11733
SHORT-01005
24
I2C3_AP_SDA_1V8
ROOM=B2B_TOUCH
I2C3_SDA_TOUCH_EEPROM_1V8_CONN
118
C11705
56PF
5%
25V
CER
1005
ROOM=B2B_TOUCH
131S00731

PAGE TITLE

B2B: Display/Touch Combo (1/2) (117)

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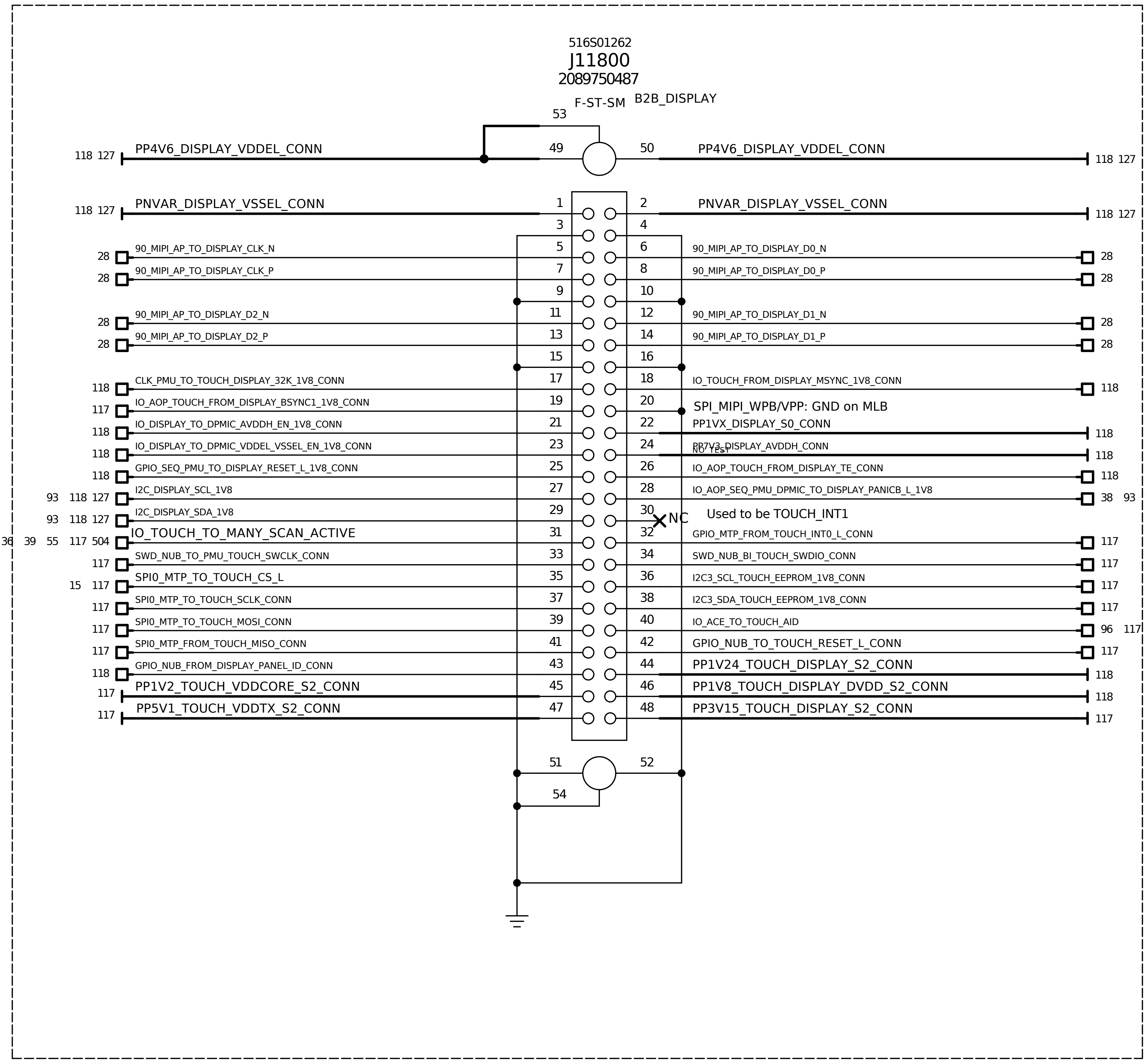
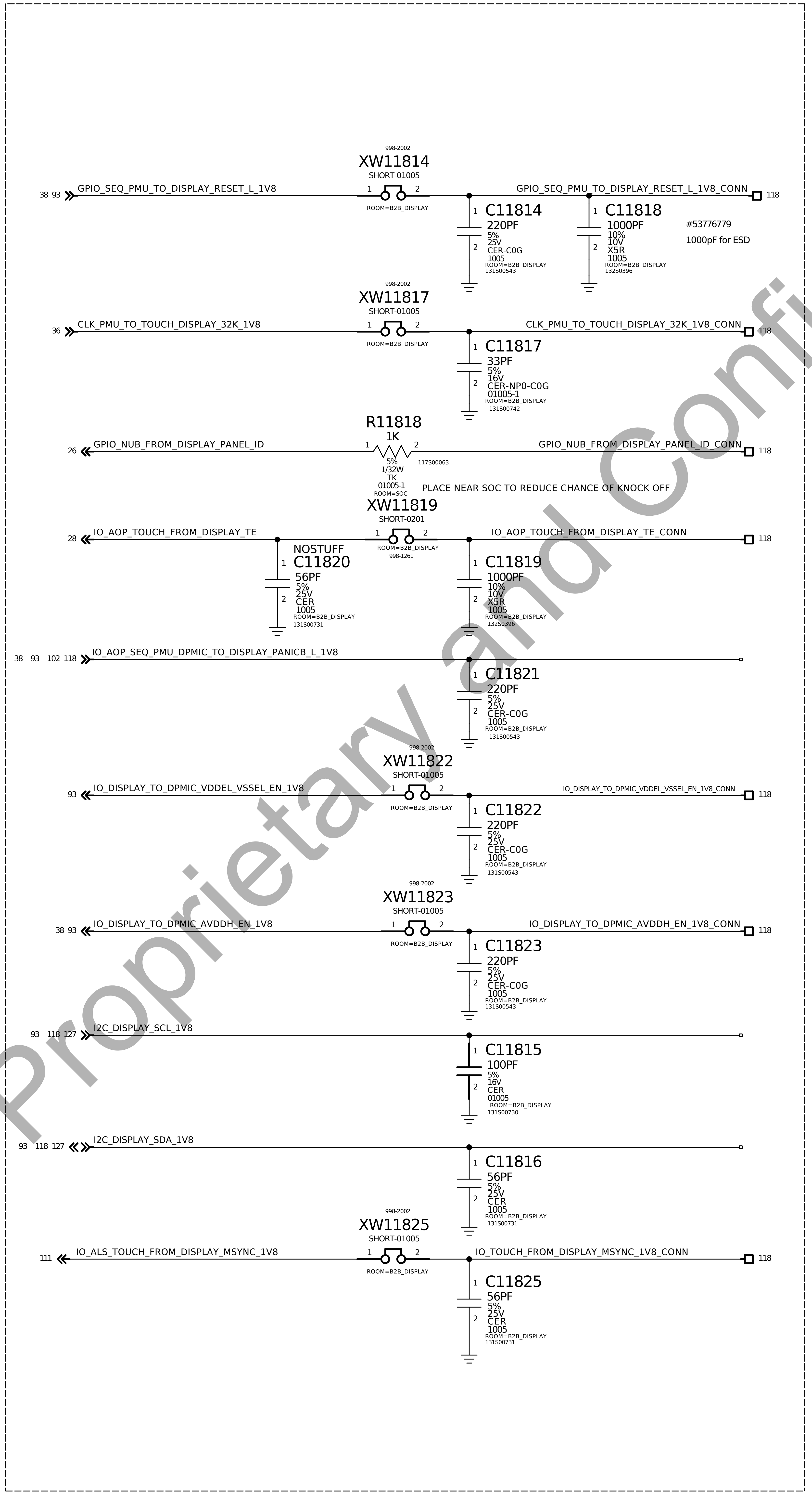
DISPLAY B2B

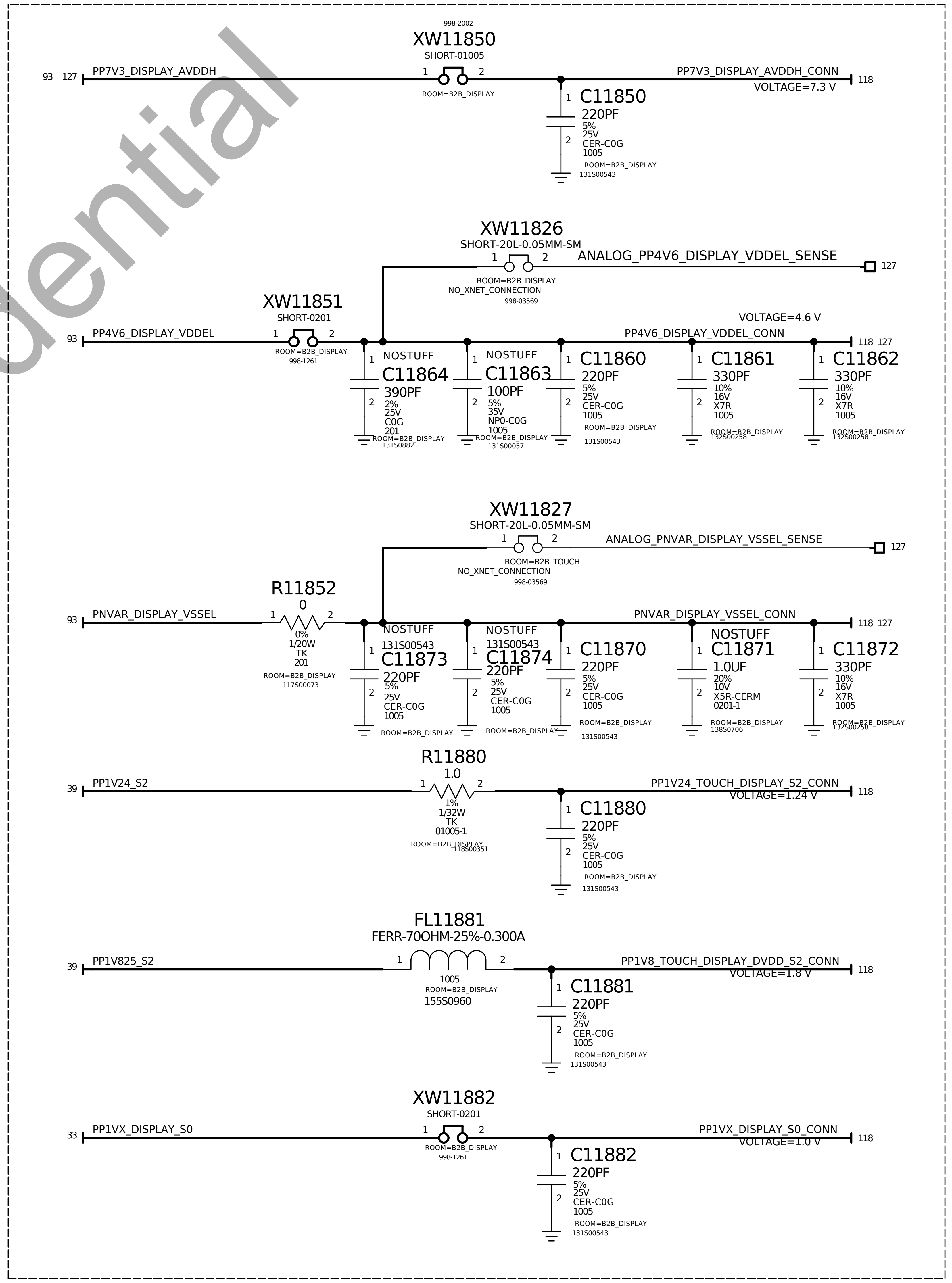
CONNECTOR


516S01262
J11800
2089750487
F-ST-SM
B2B_DISPLAY
PP4V6_DISPLAY_VDDEL_CONN
PNVAR_DISPLAY_VSSEL_CONN
90_MIPI_AP_TO_DISPLAY_CLK_N
90_MIPI_AP_TO_DISPLAY_CLK_P
90_MIPI_AP_TO_DISPLAY_D2_N
90_MIPI_AP_TO_DISPLAY_D2_P
CLK_PMU_TO_TOUCH_DISPLAY_32K_1V8_CONN
IO_AOP_TOUCH_FROM_DISPLAY_BSYNC1_1V8_CONN
IO_DISPLAY_TO_DPMIC_AVDDH_EN_1V8_CONN
IO_DISPLAY_TO_DPMIC_VDDEL_VSSEL_EN_1V8_CONN
GPIO_SEQ_PMU_TO_DISPLAY_RESET_L_1V8_CONN
I2C_DISPLAY_SCL_1V8
I2C_DISPLAY_SDA_1V8
IO_TOUCH_TO_MANY_SCAN_ACTIVE
SWD_NUB_TO_PMU_TOUCH_SWCLK_CONN
SPI0_MTP_TO_TOUCH_CS_L
SPI0_MTP_TO_TOUCH_SCLK_CONN
SPI0_MTP_TO_TOUCH_MOSI_CONN
SPI0_MTP_FROM_TOUCH_MISO_CONN
GPIO_NUB_FROM_DISPLAY_PANEL_ID_CONN
PP1V2_TOUCH_VDDCORE_S2_CONN
PP5V1_TOUCH_VDDTX_S2_CONN
90_MIPI_AP_TO_DISPLAY_D0_N
90_MIPI_AP_TO_DISPLAY_D0_P
90_MIPI_AP_TO_DISPLAY_D1_N
90_MIPI_AP_TO_DISPLAY_D1_P
IO_TOUCH_FROM_DISPLAY_MSYNC_1V8_CONN
SPI_MIPI_WPB/VPP: GND on MLB
PP1VX_DISPLAY_S0_CONN
PP7V3_DISPLAY_AVDDH_CONN
NO TEST
IO_AOP_TOUCH_FROM_DISPLAY_TE_CONN
IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L_1V8
NC
Used to be TOUCH_INT1
GPIO_MTP_FROM_TOUCH_INT0_L_CONN
SWD_NUB_BI_TOUCH_SWDIO_CONN
I2C3_SCL_TOUCH_EEPROM_1V8_CONN
I2C3_SDA_TOUCH_EEPROM_1V8_CONN
IO_ACE_TO_TOUCH_AID
GPIO_NUB_TO_TOUCH_RESET_L_CONN
PP1V24_TOUCH_DISPLAY_S2_CONN
PP1V8_TOUCH_DISPLAY_DVDD_S2_CONN
PP3V15_TOUCH_DISPLAY_S2_CONN

IO FILTERS


GPIO_SEQ_PMU_TO_DISPLAY_RESET_L_1V8
XW11814
SHORT-01005
GPIO_SEQ_PMU_TO_DISPLAY_RESET_L_1V8_CONN
C11814
220PF
C11818
1000PF
#53776779
1000pF for ESD
CLK_PMU_TO_TOUCH_DISPLAY_32K_1V8
XW11817
SHORT-01005
CLK_PMU_TO_TOUCH_DISPLAY_32K_1V8_CONN
C11817
33PF
GPIO_NUB_FROM_DISPLAY_PANEL_ID
R11818
1K
GPIO_NUB_FROM_DISPLAY_PANEL_ID_CONN
PLACE NEAR SOC TO REDUCE CHANCE OF KNOCK OFF
IO_AOP_TOUCH_FROM_DISPLAY_TE
XW11819
SHORT-0201
IO_AOP_TOUCH_FROM_DISPLAY_TE_CONN
NOSTUFF
C11820
56PF
C11819
1000PF
IO_AOP_SEQ_PMU_DPMIC_TO_DISPLAY_PANICB_L_1V8
C11821
220PF
IO_DISPLAY_TO_DPMIC_VDDEL_VSSEL_EN_1V8
XW11822
SHORT-01005
IO_DISPLAY_TO_DPMIC_VDDEL_VSSEL_EN_1V8_CONN
C11822
220PF
IO_DISPLAY_TO_DPMIC_AVDDH_EN_1V8
XW11823
SHORT-01005
IO_DISPLAY_TO_DPMIC_AVDDH_EN_1V8_CONN
C11823
220PF
I2C_DISPLAY_SCL_1V8
C11815
100PF
I2C_DISPLAY_SDA_1V8
C11816
56PF
IO_ALS_TOUCH_FROM_DISPLAY_MSYNC_1V8
XW11825
SHORT-01005
IO_TOUCH_FROM_DISPLAY_MSYNC_1V8_CONN
C11825
56PF

POWER FILTERS


PP7V3_DISPLAY_AVDDH
XW11850
SHORT-01005
PP7V3_DISPLAY_AVDDH_CONN
VOLTAGE=7.3 V
C11850
220PF
XW11826
SHORT-20L-0.05MM-SM
ANALOG_PP4V6_DISPLAY_VDDEL_SENSE
NO_XNET_CONNECTION
PP4V6_DISPLAY_VDDEL
XW11851
SHORT-0201
PP4V6_DISPLAY_VDDEL_CONN
VOLTAGE=4.6 V
NOSTUFF
C11864
390PF
NOSTUFF
C11863
100PF
C11860
220PF
C11861
330PF
C11862
330PF
XW11827
SHORT-20L-0.05MM-SM
ANALOG_PNVAR_DISPLAY_VSSEL_SENSE
PNVAR_DISPLAY_VSSEL
R11852
0
PNVAR_DISPLAY_VSSEL_CONN
NOSTUFF
C11873
220PF
NOSTUFF
C11874
220PF
C11870
220PF
NOSTUFF
C11871
1.0UF
C11872
330PF
PP1V24_S2
R11880
1.0
PP1V24_TOUCH_DISPLAY_S2_CONN
VOLTAGE=1.24 V
C11880
220PF
PP1V825_S2
FL11881
FERR-70OHM-25%-0.300A
PP1V8_TOUCH_DISPLAY_DVDD_S2_CONN
VOLTAGE=1.8 V
C11881
220PF
PP1VX_DISPLAY_S0
XW11882
SHORT-0201
PP1VX_DISPLAY_S0_CONN
VOLTAGE=1.0 V
C11882
220PF

PAGE TITLE

B2B: Display/Touch Combo (2/2) (118)

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Test Points

Power + GND
42 50 180 504 PP_VCC_BATT
TP12600 1 A TP-P55 ROOM=TEST
TP12601 1 A TP-P55 ROOM=TEST
TP12602 1 A TP-P55 ROOM=TEST
TP12603 1 A TP-P55 ROOM=TEST
TP12631 1 A TP-P55 ROOM=TEST
TP12630 1 A TP-P55 ROOM=TEST
39 40 42 503 504 506 507 PP_VDD_MAIN
TP12634 1 A TP-P55 ROOM=TEST
//123671553 ([V59]Add one TP to PP1V825_S4 on CG)
33 39 503 504 506 PP1V825_S4
TP12645 1 A TP-P55 ROOM=TEST
TP12610 1 A TP-P55 ROOM=TEST
TP12611 1 A TP-P55 ROOM=TEST
TP12612 1 A TP-P55 ROOM=TEST
TP12613 1 A TP-P55 ROOM=TEST
TP12614 1 A TP-P55 ROOM=TEST
TP12615 1 A TP-P55 ROOM=TEST
TP12616 1 A TP-P55 ROOM=TEST
TP12617 1 A TP-P55 ROOM=TEST
TP12618 1 A TP-P55 ROOM=TEST
TP12637 1 A TP-P55 ROOM=TEST
DOCK
16 25 505 I2C1_AOP_SDA
TP12643 1 A TP-P55 ROOM=TEST
16 25 505 I2C1_AOP_SCL
TP12644 1 A TP-P55 ROOM=TEST
LVCC
18 ANALOG_GPU_SENSE_P
TP12638 1 A TP-P55 ROOM=TEST
18 ANALOG_GPU_SENSE_N
TP12639 1 A TP-P55 ROOM=TEST
18 ANALOG_PCPU_SENSE_P
TP12640 1 A TP-P55 ROOM=TEST
18 ANALOG_PCPU_SENSE_N
TP12641 1 A TP-P55 ROOM=TEST
18 ANALOG_ECPU_SENSE_SE
TP12642 1 A TP-P55 ROOM=TEST
DBB
38 GPIO_PMU_SMC_FIXTURE_MODE_L
TP12650 1 A TP-P55 ROOM=TEST
DFU
10 96 IO_SOC_FROM_PMU_ACE_FORCE_DFU
TP12680 1 A TP-P55 ROOM=TEST
LDCM
95 504 IO_E85_LDCM
TP12657 1 A TP-P55 ROOM=TEST
95 504 IO_E85_LDCM_LB
TP12658 1 A TP-P55 ROOM=TEST
39 45 PP_SRAM_S1P5
TP12633 1 A TP-P55 ROOM=TEST
://111333620 ([V59][MLB][Schemnatic]TP for PP_SRAM_S1P5)
E85
96 97 SPI_ACE_TO_FLASH_CLK_3V3
TP12604 1 A TP-P55 ROOM=NTH
96 97 SPI_ACE_FROM_FLASH_CIPO_3V3
TP12605 1 A TP-P55 ROOM=NTH
96 97 SPI_ACE_TO_FLASH_COPI_3V3
TP12606 1 A TP-P55 ROOM=NTH
96 97 SPI_ACE_TO_FLASH_CS_L_3V3
TP12607 1 A TP-P55 ROOM=NTH
27 96 UART0_AP_FROM_ACE_DEBUG_RXD
TP12608 1 A TP-P55 ROOM=NTH
27 96 UART0_AP_TO_ACE_DEBUG_TXD
TP12609 1 A TP-P55 ROOM=NTH
95 180 505 90_E85_USB_TOP_CONN_P
TP12621 1 A TP-P55 ROOM=TEST
95 180 505 90_E85_USB_TOP_CONN_N
TP12622 1 A TP-P55 ROOM=TEST
95 180 505 90_E85_USB_BOT_CONN_P
TP12623 1 A TP-P55 ROOM=TEST
95 180 505 90_E85_USB_BOT_CONN_N
TP12624 1 A TP-P55 ROOM=TEST
95 180 505 PP_E85_CC1_CONN
TP12625 1 A TP-P55 ROOM=TEST
95 180 505 PP_E85_CC2_CONN
TP12626 1 A TP-P55 ROOM=TEST
96 180 505 IO_E85_TO_ACE_CON_DETECT_L_CONN
TP12627 1 A TP-P55 ROOM=TEST
40 95 180 505 PP_VBUS1_E85
TP12628 1 A TP-P55 ROOM=TEST
TP12629 1 A TP-P55 ROOM=TEST
96 TP_ACE_I2C1_SCL_GPIO22
TP12619 1 A TP-P55 ROOM=NTH
96 TP_ACE_I2C1_SDA_GPIO23
TP12620 1 A TP-P55 ROOM=NTH
40 96 IO_ACE_TO_CHARGER_VBUS1_VALID_L_HV
TP12632 1 A TP-P55 ROOM=NTH
95 180 504 IO_E85_SBU1
TP12635 1 A TP-P55 ROOM=NTH
95 180 504 IO_E85_SBU2
TP12636 1 A TP-P55 ROOM=NTH

PAGE TITLE
TESTING: Test Points (126)

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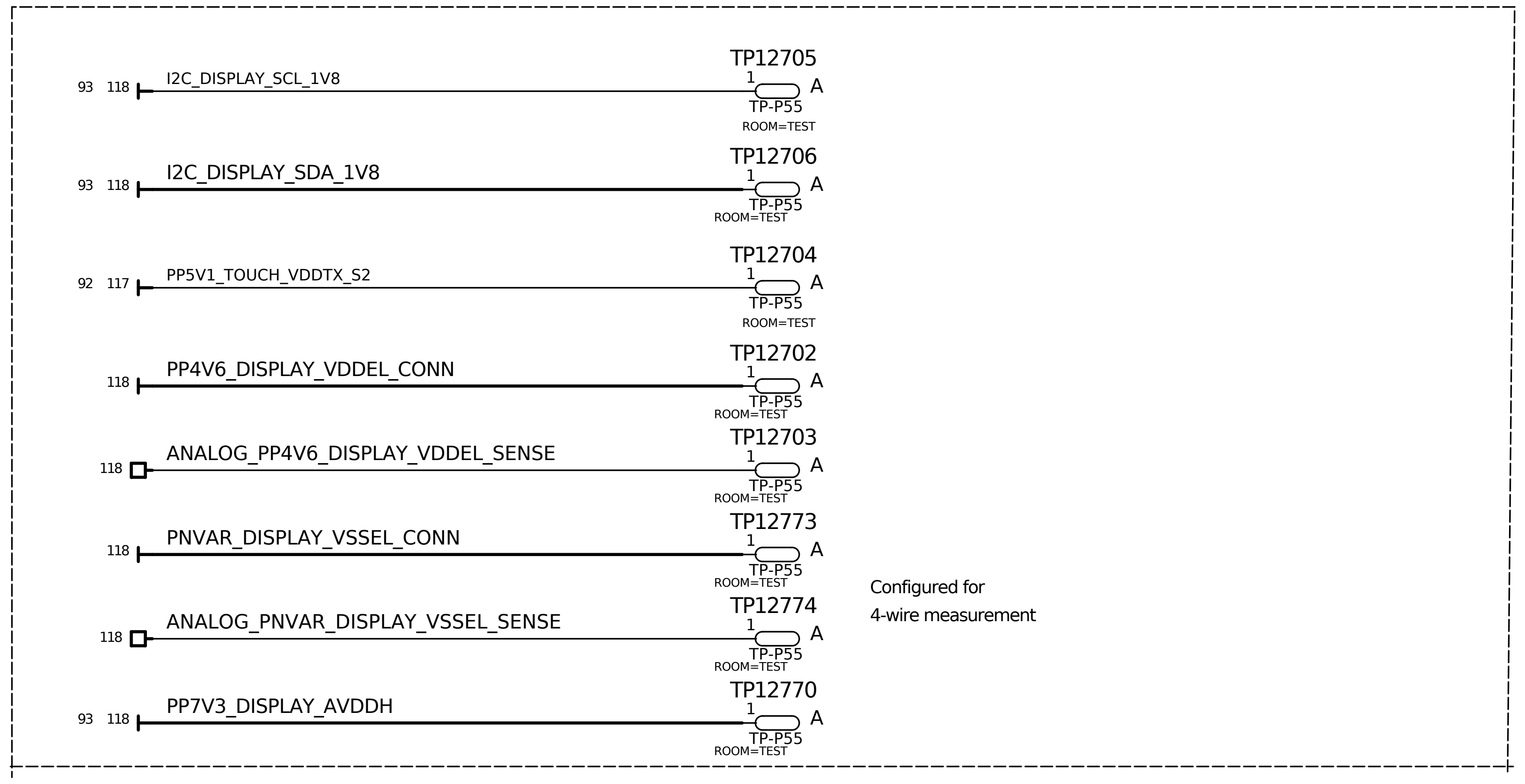
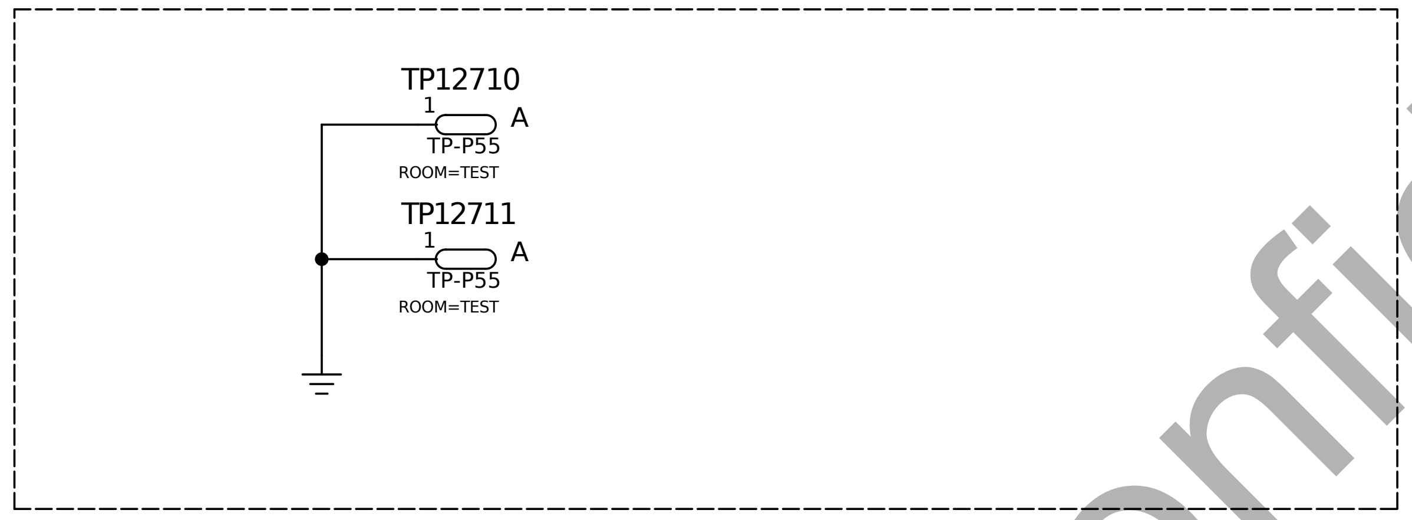
Test Points (FF Specific)

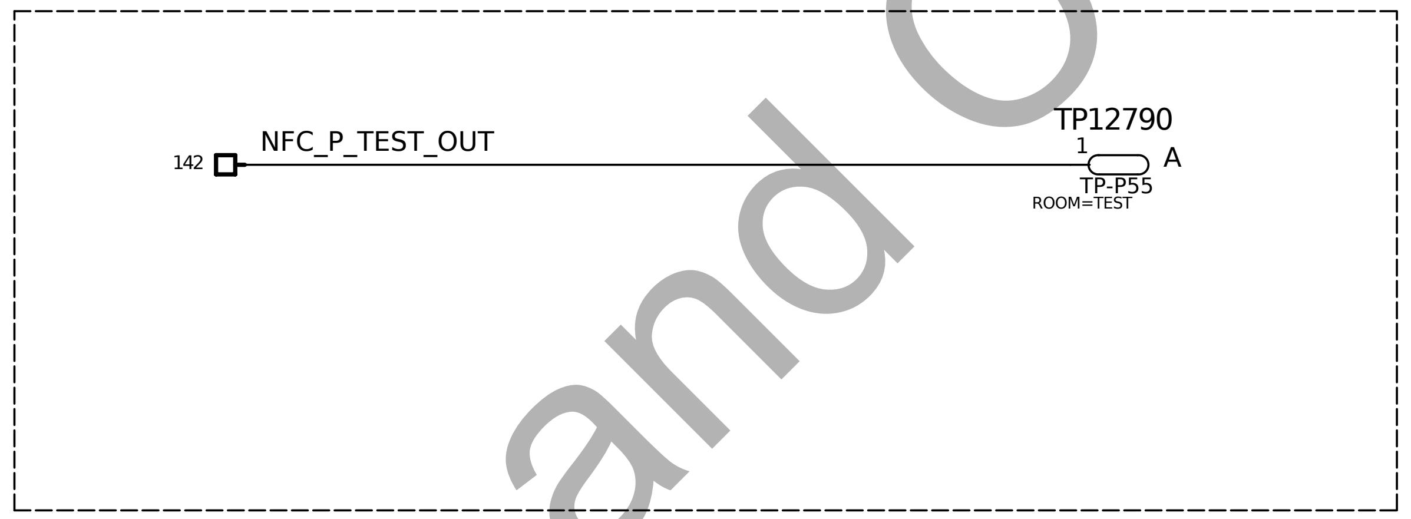
Display + Touch


93 118 I2C_DISPLAY_SCL_1V8
TP12705 1 A TP-P55 ROOM=TEST
93 118 I2C_DISPLAY_SDA_1V8
TP12706 1 A TP-P55 ROOM=TEST
92 117 PP5V1_TOUCH_VDDTX_S2
TP12704 1 A TP-P55 ROOM=TEST
118 PP4V6_DISPLAY_VDDEL_CONN
TP12702 1 A TP-P55 ROOM=TEST
118 ANALOG_PP4V6_DISPLAY_VDDEL_SENSE
TP12703 1 A TP-P55 ROOM=TEST
118 PNVAR_DISPLAY_VSSEL_CONN
TP12773 1 A TP-P55 ROOM=TEST
118 ANALOG_PNVAR_DISPLAY_VSSEL_SENSE
TP12774 1 A TP-P55 ROOM=TEST
93 118 PP7V3_DISPLAY_AVDDH
TP12770 1 A TP-P55 ROOM=TEST
Configured for
4-wire measurement

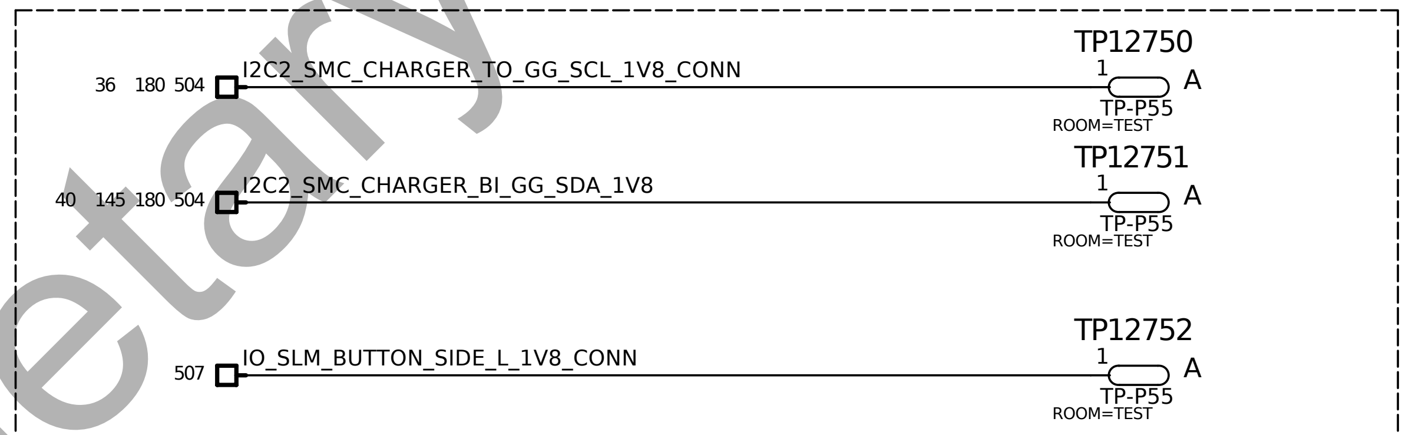
GND


TP12710 1 A TP-P55 ROOM=TEST
TP12711 1 A TP-P55 ROOM=TEST

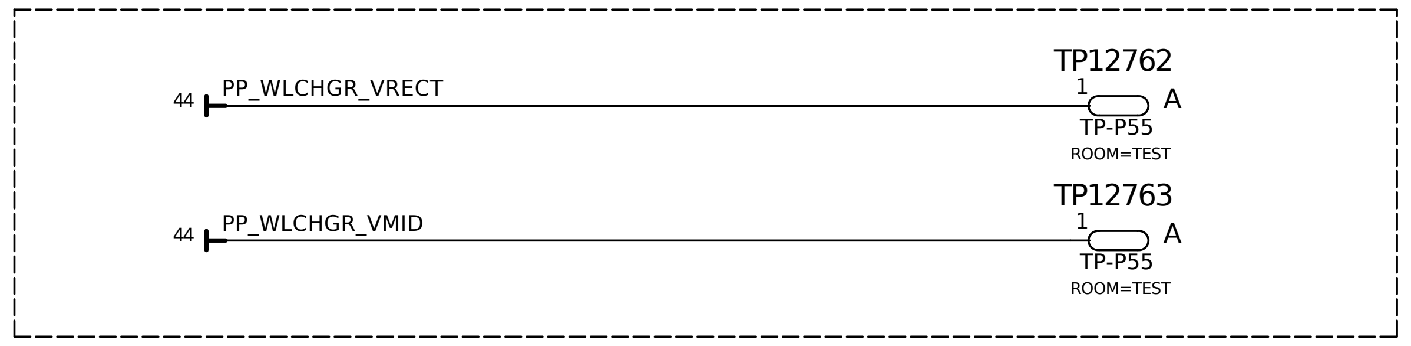
NFC


142 NFC_P_TEST_OUT
TP12790 1 A TP-P55 ROOM=TEST

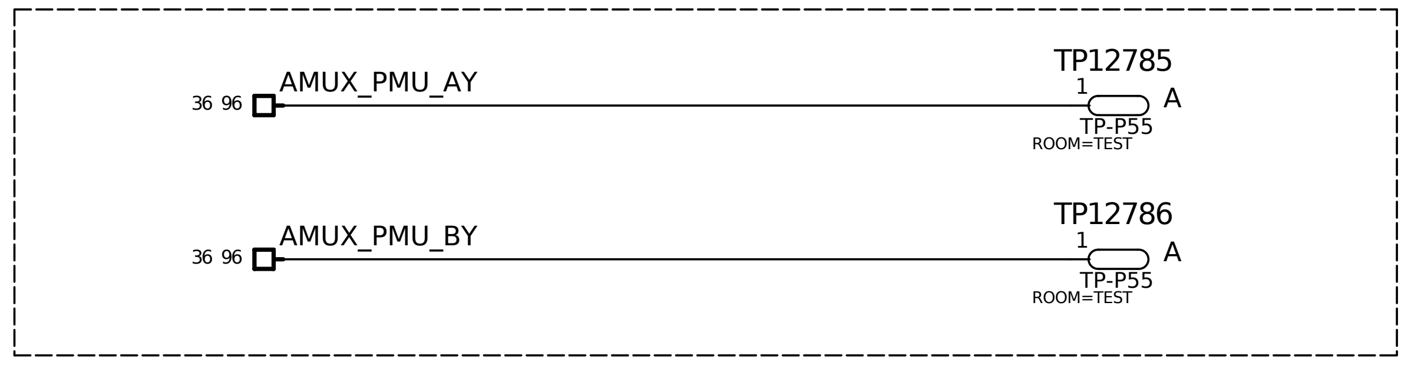
GAS GAUGE + SLM


36 180 504 I2C2_SMC_CHARGER_TO_GG_SCL_1V8_CONN
TP12750 1 A TP-P55 ROOM=TEST
40 145 180 504 I2C2_SMC_CHARGER_BI_GG_SDA_1V8
TP12751 1 A TP-P55 ROOM=TEST
507 IO_SLM_BUTTON_SIDE_L_1V8_CONN
TP12752 1 A TP-P55 ROOM=TEST

WLCHGR


44 PP_WLCHGR_VRECT
TP12762 1 A TP-P55 ROOM=TEST
44 PP_WLCHGR_VMID
TP12763 1 A TP-P55 ROOM=TEST

AMUX


36 96 AMUX_PMU_AY
TP12785 1 A TP-P55 ROOM=TEST
36 96 AMUX_PMU_BY
TP12786 1 A TP-P55 ROOM=TEST

PAGE TITLE
TESTING: Test Points (FF Specific) (127)

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Probe Points

Parrot
96 99 GPIO_ACE_FROM_PARROT_INT_L 1 PP PP12828 P2MM-NSM SM ROOM=TEST
144 90_ATC0_EUSB_PARROT_BI_AP_P 1 PP PP12831 P2MM-NSM SM ROOM=TEST
144 90_ATC0_EUSB_PARROT_BI_AP_N 1 PP PP12832 P2MM-NSM SM ROOM=TEST
PCIe
11 31 90_PCIE_ST0_AP_TO_NAND_REFCLK_P 1 PP PP12854 P2MM-NSM SM ROOM=TEST
11 31 90_PCIE_ST0_AP_TO_NAND_REFCLK_N 1 PP PP12855 P2MM-NSM SM ROOM=TEST
SOC Debug
8 GPIO_BOARD_ID0 1 PP PP12856 P2MM-NSM SM ROOM=TEST
15 27 IO_AON_TO_AP_XTAL_CFSB 1 PP PP12857 P2MM-NSM SM ROOM=TEST
27 IO_AP_FROM_PMU_UVWARN0_L 1 PP PP12859 P2MM-NSM SM ROOM=TEST
27 IO_AP_FROM_PMU_PRE_SHDN_L 1 PP PP12870 P2MM-NSM SM ROOM=TEST
27 IO_AP_FROM_PMU_UVWARN1_L 1 SM PP PP12871 P2MM-NSM ROOM=TEST
PMU
27 36 IO_PMU_TO_SYSTEM_RESET_L 1 PP PP12802 P2MM-NSM SM ROOM=TEST
15 36 CLK_PMU_TO_AOP_32K 1 PP PP12803 P2MM-NSM SM ROOM=TEST
38 39 145 IO_BUTTON_SIDE_L_1V8 1 PP PP12804 P2MM-NSM SM ROOM=TEST
15 36 IO_SOC_TO_PMU_WDOG_RESET_L 1 PP PP12805 P2MM-NSM SM ROOM=TEST
10 27 IO_SOC_TO_PMU_SOCHOT_RESET_L 1 PP PP12806 P2MM-NSM SM ROOM=TEST
15 504 SWD_NUB_BI_BB_SWDIO 1 PP PP12807 P2MM-NSM SM ROOM=TEST
15 144 SWD_NUB_BI_PMU_SWDIO 1 PP PP12811 P2MM-NSM SM ROOM=TEST
38 43 GPIO_SEQ_PMU_TO_BOOST_BYPASS_L_1V8 1 PP PP12808 P2MM-NSM SM ROOM=TEST
26 36 39 IO_PMU_TO_SEP_DOUBLE_CLICK_DET 1 PP PP12810 P2MM-NSM SM ROOM=TEST
38 40 GPIO_PMU_FROM_CHARGER_VBUS_DET_INT_L_1V8 1 PP PP12812 P2MM-NSM SM ROOM=TEST
E85
96 103 GPIO_ACE_DEBUG_GPIO0_3V3 PLACE_SIDE=TOP 1 PP PP12834 P2MM-NSM SM ROOM=TEST
15 SOC_NUB_DBGWRAP_TEST 1 PP PP12833 P2MM-NSM SM ROOM=TEST
27 103 GPIO_ACE_DEBUG_GPIO0_TO_UART1_AP_RXD PLACE_SIDE=TOP 1 PP PP12845 P2MM-NSM 998-6110 SM ROOM=TEST
15 96 SWD_SOC_FROM_ACE_SWCLK 1 PP PP12838 P2MM-NSM SM ROOM=TEST
15 96 SWD_SOC_BI_ACE_SWDIO 1 PP PP12839 P2MM-NSM SM ROOM=TEST
96 97 IO_E85_AID0_BI_MOGUL 1 PP PP12840 P2MM-NSM SM ROOM=TEST
ACE SWDIO
26 95 GPIO_AP_BI_ACE_SWDIO 1 PP PP12841 P2MM-NSM SM ROOM=TEST
26 95 GPIO_AP_TO_ACE_SWCLK 1 PP PP12842 P2MM-NSM SM ROOM=TEST
NAND
31 38 GPIO_PMU_TO_NAND_LOW_BATT_BOOT_L 1 PP PP12860 P2MM-NSM SM ROOM=TEST
11 31 IO_AP_TO_NAND_BOOT_FROM_HOST_FW 1 PP PP12861 P2MM-NSM SM ROOM=TEST
10 31 SWD_AP_BI_NAND_SWDIO 1 PP PP12862 P2MM-NSM SM ROOM=TEST
10 31 SWD_AP_TO_MANY_SWCLK2 1 PP PP12863 P2MM-NSM SM ROOM=TEST
31 ANALOG_NAND_ANI0_VREF 1 PP PP12864 P2MM-NSM SM ROOM=TEST
31 36 40 IO_PMU_TO_MANY_SYSTEM_ALIVE 1 PP PP12865 P2MM-NSM SM ROOM=TEST
11 31 IO_AP_TO_NAND_RESET_L 1 PP PP12866 P2MM-NSM SM ROOM=TEST
31 ANALOG_NAND_ANI1_VREF 1 PP PP12867 P2MM-NSM SM ROOM=TEST
SANDCAT
14 17 IO_SEP_TO_SANDCAT_HOSTMODE 1 PP PP12825 P2MM-NSM SM ROOM=PTY1
14 17 IO_SEP_TO_SANDCAT_RESET_L 1 PP PP12829 P2MM-NSM SM ROOM=PTY1
Alda
38 55 70 GPIO_CAM_PMU1_FROM_REGULUS_INT_1V8 1 PP PP12843 P2MM-NSM SM ROOM=TEST
55 70 GPIO_CAM_PMU1_TO_REGULUS_ENABLE_1V8 1 PP PP12844 P2MM-NSM SM ROOM=TEST
Codec
26 79 GPIO_AP_FROM_CODEC_INT_L 1 PP PP12813 P2MM-NSM SM ROOM=TEST
27 79 SPI3_AP_TO_CODEC_CS_L 1 PP PP12815 P2MM-NSM SM ROOM=TEST
27 79 SPI3_AP_TO_CODEC_MOSI 1 PP PP12816 P2MM-NSM SM ROOM=TEST
27 79 SPI3_AP_FROM_CODEC_MISO 1 PP PP12817 P2MM-NSM SM ROOM=TEST
78 81 PDM_OUT1_CODEC_TO_SPKRAMP_TOP_CLK 1 PP PP12826 P2MM-NSM SM ROOM=TEST
78 81 PDM_OUT1_CODEC_TO_SPKRAMP_TOP_DATA 1 PP PP12827 P2MM-NSM SM ROOM=TEST
26 79 GPIO_AOP_TO_CODEC_RESET_L 1 PP PP12847 P2MM-NSM SM ROOM=TEST
38 505 GPIO_S4_PMU_TO_SPKRAMP_BOT_RESET_L 1 PP PP12848 P2MM-NSM SM ROOM=TEST
81 505 IO_SPKRAMP_TO_SPKRAMP_SYNC 1 PP PP12849 P2MM-NSM SM ROOM=TEST
I2S
16 79 I2S1_AOP_FROM_CODEC_ASP1_BCLK 1 PP PP12820 P2MM-NSM SM ROOM=PTY2
16 79 I2S1_AOP_FROM_CODEC_ASP1_LRCLK 1 PP PP12821 P2MM-NSM SM ROOM=PTY2
16 79 I2S1_AOP_TO_CODEC_ASP1_DOUT 1 PP PP12822 P2MM-NSM SM ROOM=PTY2
16 79 I2S1_AOP_FROM_CODEC_ASP1_DIN 1 PP PP12823 P2MM-NSM SM ROOM=PTY2
16 79 I2S2_AOP_TO_CODEC_ASP2_BCLK 1 PP PP12886 P2MM-NSM SM ROOM=PTY2
16 79 I2S2_AOP_TO_CODEC_ASP2_LRCLK 1 PP PP12887 P2MM-NSM SM ROOM=PTY2
16 79 I2S2_AOP_TO_CODEC_ASP2_DOUT 1 PP PP12888 P2MM-NSM SM ROOM=PTY2
16 79 I2S2_AOP_FROM_CODEC_ASP2_DIN 1 PP PP12889 P2MM-NSM SM ROOM=PTY2
CHROMITE
144 GPIO_SPARE_WLCHGR_SUPER_PP 1 PP PP12878 P2MM-NSM SM ROOM=CHROMITE
44 I2C_SDA_WLCHGR 1 PP PP12879 P2MM-NSM SM ROOM=CHROMITE
44 I2C_SCL_WLCHGR 1 PP PP12880 P2MM-NSM SM ROOM=CHROMITE
44 IO_WLCHGR_INT 1 PP PP12881 P2MM-NSM SM ROOM=CHROMITE
15 144 SWD_NUB_BI_WLCHGR_SWDIO 1 PP PP12883 P2MM-NSM SM ROOM=CHROMITE
44 WLCHGR_AMUX0 1 PP PP12884 P2MM-NSM SM ROOM=CHROMITE
44 WLCHGR_AMUX1 1 PP PP12885 P2MM-NSM SM ROOM=CHROMITE
Bump Sense
18 ANALOG_SOC_SENSE_P PP128D6 P2MM-NSM SM 1 PP ROOM=TEST
18 ANALOG_SOC_SENSE_N PP128AD7 P2MM-NSM SM 1 PP ROOM=TEST
21 ANALOG_DCS_SENSE_SE PP128D8 P2MM-NSM SM 1 PP ROOM=TEST
21 ANALOG_DDR_SENSE_SE PP128D9 P2MM-NSM SM 1 PP ROOM=TEST
21 ANALOG_VDDQL_SENSE_SE PP128E1 P2MM-NSM SM 1 PP ROOM=TEST
21 ANALOG_AMPH_SENSE_SE PP128E2 P2MM-NSM SM 1 PP ROOM=TEST
19 ANALOG_CPU_SRAM_SENSE_SE PP128F0 P2MM-NSM SM 1 PP ROOM=TEST
21 ANALOG_DISP_SENSE_SE PP128F1 P2MM-NSM SM 1 PP ROOM=TEST
AMUX Probe Points
10 38 AMUX_SOC_TO_PMU_AMUX_OUT_POS 1 PP PP12818 P2MM-NSM SM
10 38 AMUX_SOC_TO_PMU_AMUX_OUT_NEG 1 PP PP12819 P2MM-NSM SM
ARUE
38 45 GPIO_SEQ_PMU_TO_SLP_CACHE_SW_EN_S1P5 1 PP PP12814 P2MM-NSM SM ROOM=PTY1
D C B A

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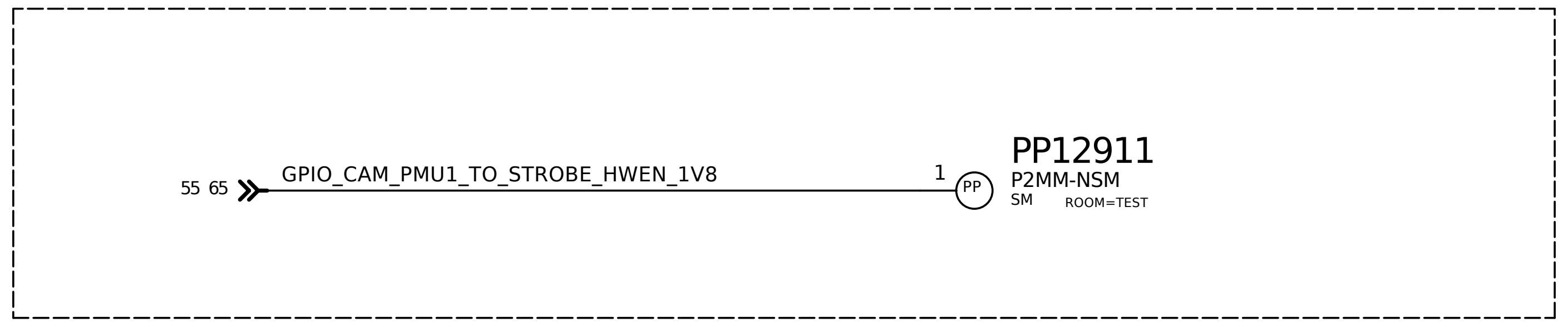
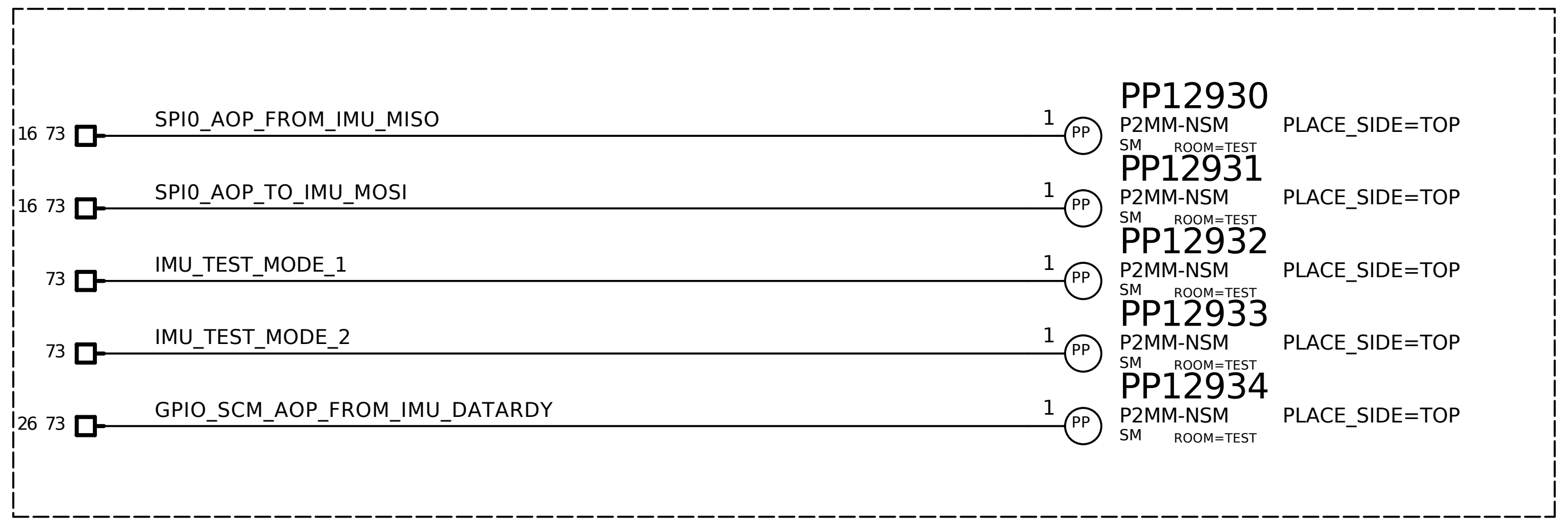
Probe Points

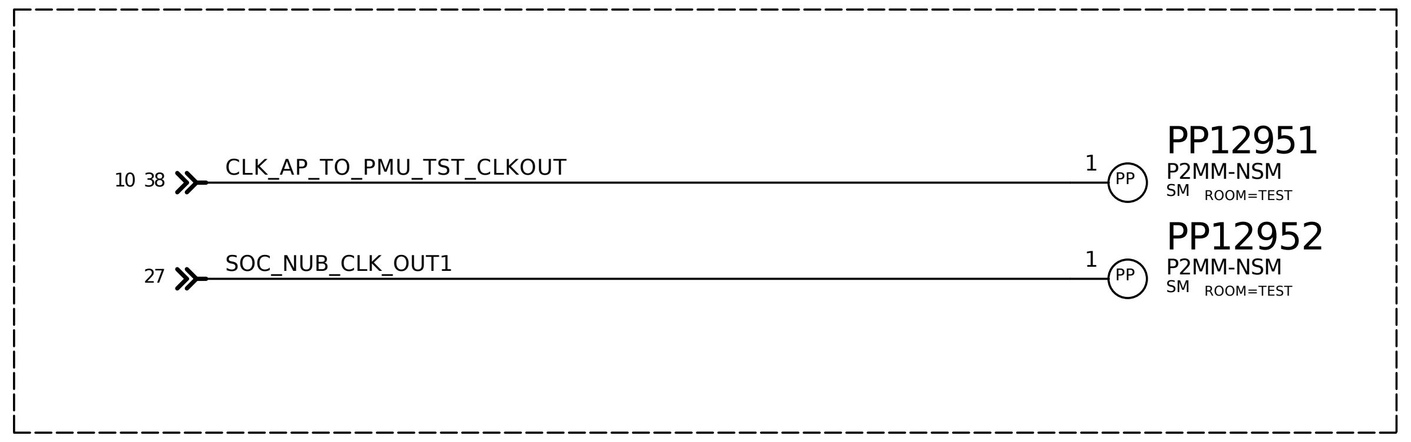
CAM + STROBE


55 65
GPIO_CAM_PMU1_TO_STROBE_HWEN_1V8
1
PP
PP12911
P2MM-NSM
SM
ROOM=TEST

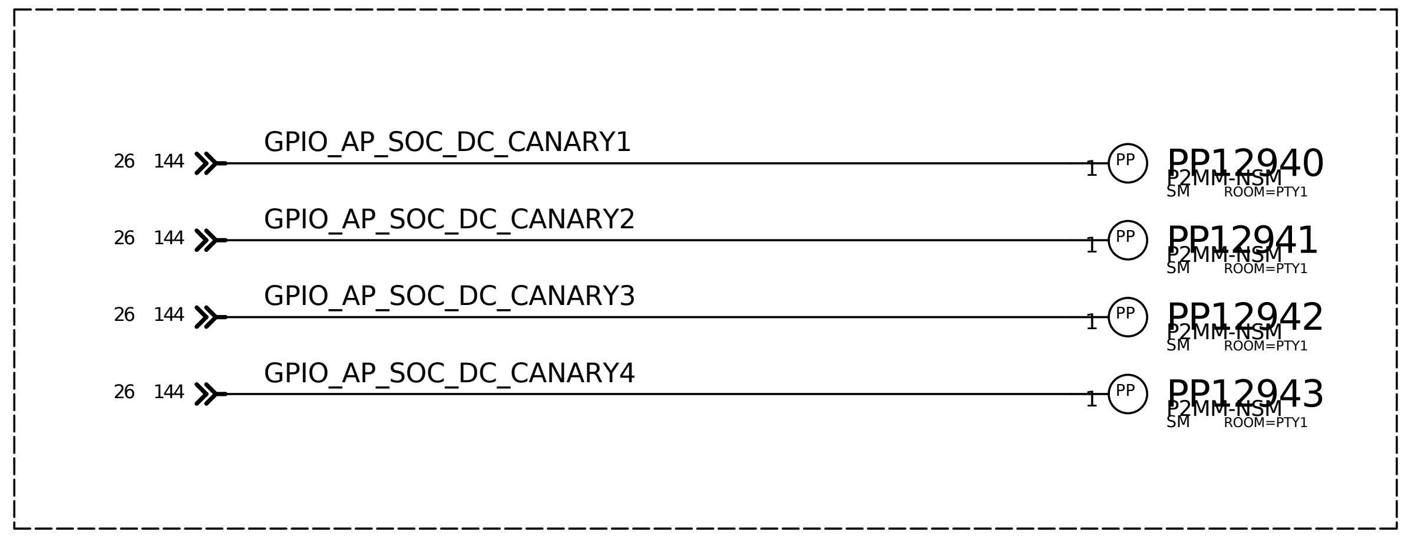
IMU


16 73
SPI0_AOP_FROM_IMU_MISO
1
PP
PP12930
P2MM-NSM
SM
ROOM=TEST
PLACE_SIDE=TOP
16 73
SPI0_AOP_TO_IMU_MOSI
1
PP
PP12931
P2MM-NSM
SM
ROOM=TEST
PLACE_SIDE=TOP
73
IMU_TEST_MODE_1
1
PP
PP12932
P2MM-NSM
SM
ROOM=TEST
PLACE_SIDE=TOP
73
IMU_TEST_MODE_2
1
PP
PP12933
P2MM-NSM
SM
ROOM=TEST
PLACE_SIDE=TOP
26 73
GPIO_SCM_AOP_FROM_IMU_DATARDY
1
PP
PP12934
P2MM-NSM
SM
ROOM=TEST
PLACE_SIDE=TOP

SOC


10 38
CLK_AP_TO_PMU_TST_CLKOUT
1
PP
PP12951
P2MM-NSM
SM
ROOM=TEST
27
SOC_NUB_CLK_OUT1
1
PP
PP12952
P2MM-NSM
SM
ROOM=TEST

SOC CANARY


26 144
GPIO_AP_SOC_DC_CANARY1
1
PP
PP12940
P2MM-NSM
SM
ROOM=PTY1
26 144
GPIO_AP_SOC_DC_CANARY2
1
PP
PP12941
P2MM-NSM
SM
ROOM=PTY1
26 144
GPIO_AP_SOC_DC_CANARY3
1
PP
PP12942
P2MM-NSM
SM
ROOM=PTY1
26 144
GPIO_AP_SOC_DC_CANARY4
1
PP
PP12943
P2MM-NSM
SM
ROOM=PTY1

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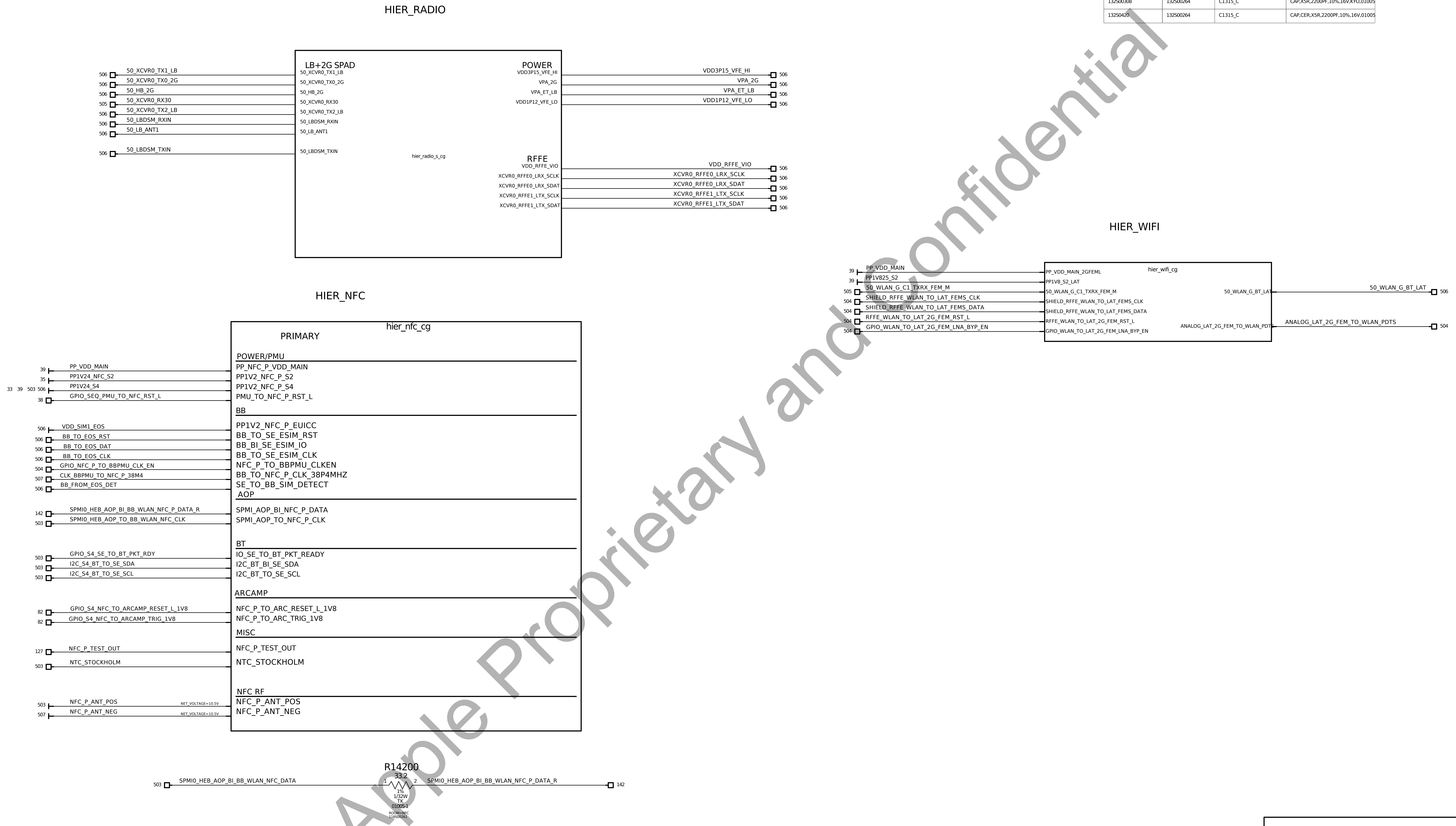
HIERARCHY BLOCKS

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
132S00308	132S00264	C1315_C	CAP,X5R,2200PF,10%,16V,KYO,01005
132S0420	132S00264	C1315_C	CAP,CER,X5R,2200PF,10%,16V,01005



HIER_RADIO
LB+2G SPAD
POWER
RFFE
hier_radio_s_cg
506 50_XCVR0_TX1_LB
506 50_XCVR0_TX0_2G
506 50_HB_2G
505 50_XCVR0_RX30
506 50_XCVR0_TX2_LB
506 50_LBDSM_RXIN
506 50_LB_ANT1
506 50_LBDSM_TXIN
50_XCVR0_TX1_LB
50_XCVR0_TX0_2G
50_HB_2G
50_XCVR0_RX30
50_XCVR0_TX2_LB
50_LBDSM_RXIN
50_LB_ANT1
50_LBDSM_TXIN
VDD3P15_VFE_HI
VPA_2G
VPA_ET_LB
VDD1P12_VFE_LO
VDD3P15_VFE_HI 506
VPA_2G 506
VPA_ET_LB 506
VDD1P12_VFE_LO 506
VDD_RFFE_VIO
XCVR0_RFFE0_LRX_SCLK
XCVR0_RFFE0_LRX_SDAT
XCVR0_RFFE1_LTX_SCLK
XCVR0_RFFE1_LTX_SDAT
VDD_RFFE_VIO 506
XCVR0_RFFE0_LRX_SCLK 506
XCVR0_RFFE0_LRX_SDAT 506
XCVR0_RFFE1_LTX_SCLK 506
XCVR0_RFFE1_LTX_SDAT 506
HIER_WIFI
hier_wifi_cg
39 PP_VDD_MAIN
39 PP1V825_S2
505 50_WLAN_G_C1_TXRX_FEM_M
504 SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK
504 SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA
504 RFFE_WLAN_TO_LAT_2G_FEM_RST_L
504 GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN
PP_VDD_MAIN_2GFEML
PP1V8_S2_LAT
50_WLAN_G_C1_TXRX_FEM_M
SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK
SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA
RFFE_WLAN_TO_LAT_2G_FEM_RST_L
GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN
50_WLAN_G_BT_LAT
ANALOG_LAT_2G_FEM_TO_WLAN_PDTS
50_WLAN_G_BT_LAT 506
ANALOG_LAT_2G_FEM_TO_WLAN_PDTS 504
HIER_NFC
hier_nfc_cg
PRIMARY
POWER/PMU
39 PP_VDD_MAIN
35 PP1V24_NFC_S2
33 39 503 506 PP1V24_S4
38 GPIO_SEQ_PMU_TO_NFC_RST_L
PP_NFC_P_VDD_MAIN
PP1V2_NFC_P_S2
PP1V2_NFC_P_S4
PMU_TO_NFC_P_RST_L
BB
506 VDD_SIM1_EOS
506 BB_TO_EOS_RST
506 BB_TO_EOS_DAT
506 BB_TO_EOS_CLK
504 GPIO_NFC_P_TO_BBPMU_CLK_EN
507 CLK_BBPMU_TO_NFC_P_38M4
506 BB_FROM_EOS_DET
PP1V2_NFC_P_EUICC
BB_TO_SE_ESIM_RST
BB_BI_SE_ESIM_IO
BB_TO_SE_ESIM_CLK
NFC_P_TO_BBPMU_CLKEN
BB_TO_NFC_P_CLK_38P4MHZ
SE_TO_BB_SIM_DETECT
AOP
142 SPMI0_HEB_AOP_BI_BB_WLAN_NFC_P_DATA_R
503 SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
SPMI_AOP_BI_NFC_P_DATA
SPMI_AOP_TO_NFC_P_CLK
BT
503 GPIO_S4_SE_TO_BT_PKT_RDY
503 I2C_S4_BT_TO_SE_SDA
503 I2C_S4_BT_TO_SE_SCL
IO_SE_TO_BT_PKT_READY
I2C_BT_BI_SE_SDA
I2C_BT_TO_SE_SCL
ARCAMP
82 GPIO_S4_NFC_TO_ARCAMP_RESET_L_1V8
82 GPIO_S4_NFC_TO_ARCAMP_TRIG_1V8
NFC_P_TO_ARC_RESET_L_1V8
NFC_P_TO_ARC_TRIG_1V8
MISC
127 NFC_P_TEST_OUT
503 NTC_STOCKHOLM
NFC_P_TEST_OUT
NTC_STOCKHOLM
NFC RF
503 NFC_P_ANT_POS
507 NFC_P_ANT_NEG
NET_VOLTAGE=10.5V
NET_VOLTAGE=10.5V
NFC_P_ANT_POS
NFC_P_ANT_NEG
R14200
33.2
1
2
1%
1/32W
TK
01005-1
ROOM=NFC
118S00261
503 SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA
SPMI0_HEB_AOP_BI_BB_WLAN_NFC_P_DATA_R 142

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HIERARCHIES: TOP (142)

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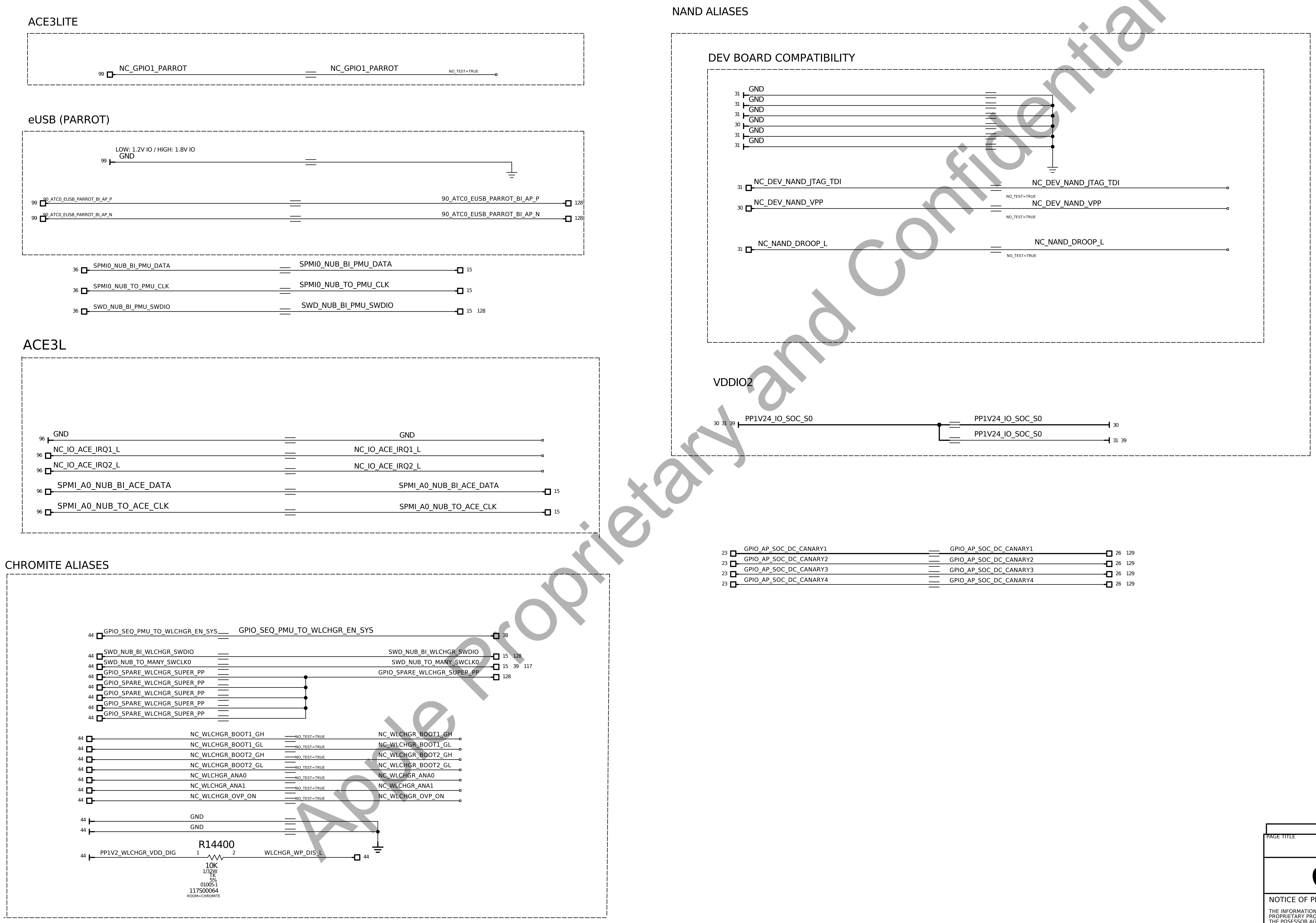
GENERAL ALIASES


ACE3LITE
99 NC_GPIO1_PARROT
NC_GPIO1_PARROT
NO_TEST=TRUE
eUSB (PARROT)
LOW: 1.2V IO / HIGH: 1.8V IO
99 GND
99 90_ATC0_EUSB_PARROT_BI_AP_P
90_ATC0_EUSB_PARROT_BI_AP_P 128
99 90_ATC0_EUSB_PARROT_BI_AP_N
90_ATC0_EUSB_PARROT_BI_AP_N 128
36 SPMI0_NUB_BI_PMU_DATA
SPMI0_NUB_BI_PMU_DATA 15
36 SPMI0_NUB_TO_PMU_CLK
SPMI0_NUB_TO_PMU_CLK 15
36 SWD_NUB_BI_PMU_SWDIO
SWD_NUB_BI_PMU_SWDIO 15 128
ACE3L
96 GND
GND
96 NC_IO_ACE_IRQ1_L
NC_IO_ACE_IRQ1_L
96 NC_IO_ACE_IRQ2_L
NC_IO_ACE_IRQ2_L
96 SPMI_A0_NUB_BI_ACE_DATA
SPMI_A0_NUB_BI_ACE_DATA 15
96 SPMI_A0_NUB_TO_ACE_CLK
SPMI_A0_NUB_TO_ACE_CLK 15
CHROMITE ALIASES
44 GPIO_SEQ_PMU_TO_WLCHGR_EN_SYS
GPIO_SEQ_PMU_TO_WLCHGR_EN_SYS 38
44 SWD_NUB_BI_WLCHGR_SWDIO
SWD_NUB_BI_WLCHGR_SWDIO 15 128
44 SWD_NUB_TO_MANY_SWCLK0
SWD_NUB_TO_MANY_SWCLK0 15 39 117
44 GPIO_SPARE_WLCHGR_SUPER_PP
GPIO_SPARE_WLCHGR_SUPER_PP 128
44 GPIO_SPARE_WLCHGR_SUPER_PP
44 GPIO_SPARE_WLCHGR_SUPER_PP
44 GPIO_SPARE_WLCHGR_SUPER_PP
44 GPIO_SPARE_WLCHGR_SUPER_PP
44 NC_WLCHGR_BOOT1_GH
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44 NC_WLCHGR_BOOT1_GL
NO_TEST=TRUE
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44 NC_WLCHGR_BOOT2_GH
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44 NC_WLCHGR_ANA1
NO_TEST=TRUE
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44 GND
44 GND
R14400
44 PP1V2_WLCHGR_VDD_DIG
1
2
WLCHGR_WP_DIS_L 44
10K
1/32W
TK
5%
01005-1
117S00064
ROOM=CHROMITE
NAND ALIASES
DEV BOARD COMPATIBILITY
31 GND
31 GND
31 GND
30 GND
31 GND
31 GND
31 NC_DEV_NAND_JTAG_TDI
NC_DEV_NAND_JTAG_TDI
NO_TEST=TRUE
30 NC_DEV_NAND_VPP
NC_DEV_NAND_VPP
NO_TEST=TRUE
31 NC_NAND_DROOP_L
NC_NAND_DROOP_L
NO_TEST=TRUE
VDDIO2
30 31 39 PP1V24_IO_SOC_S0
PP1V24_IO_SOC_S0 30
PP1V24_IO_SOC_S0 31 39
23 GPIO_AP_SOC_DC_CANARY1
GPIO_AP_SOC_DC_CANARY1 26 129
23 GPIO_AP_SOC_DC_CANARY2
GPIO_AP_SOC_DC_CANARY2 26 129
23 GPIO_AP_SOC_DC_CANARY3
GPIO_AP_SOC_DC_CANARY3 26 129
23 GPIO_AP_SOC_DC_CANARY4
GPIO_AP_SOC_DC_CANARY4 26 129

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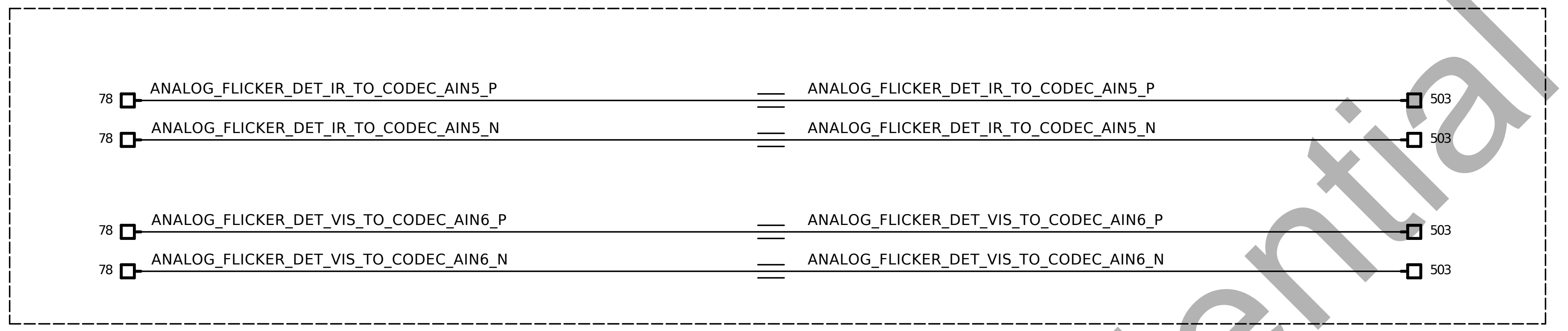
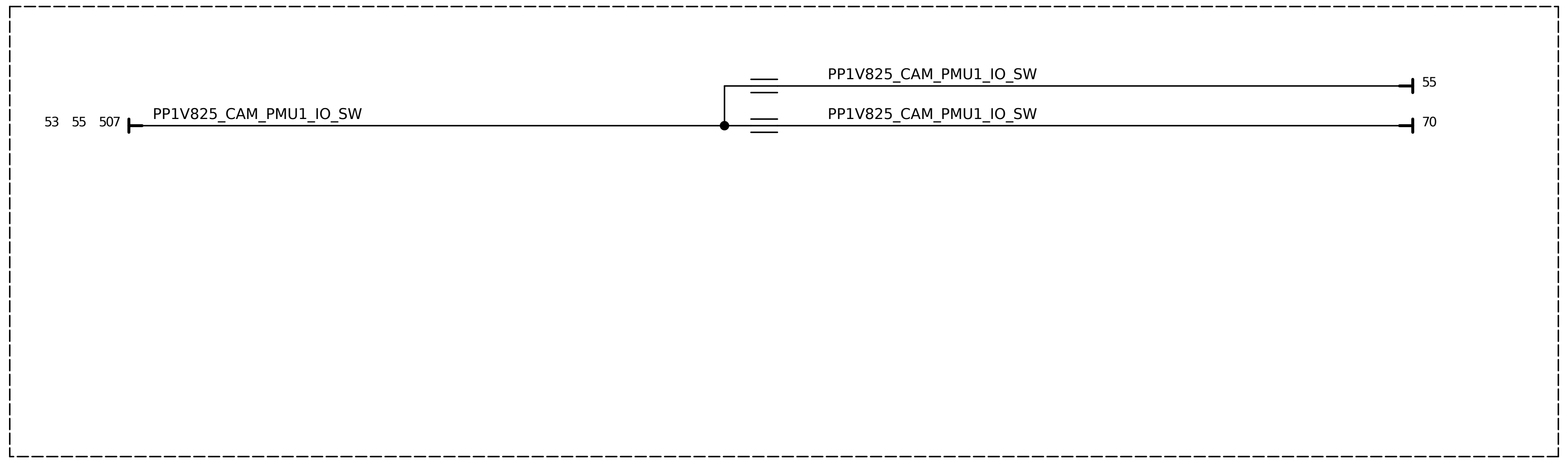
FF SPECIFIC ALIASES

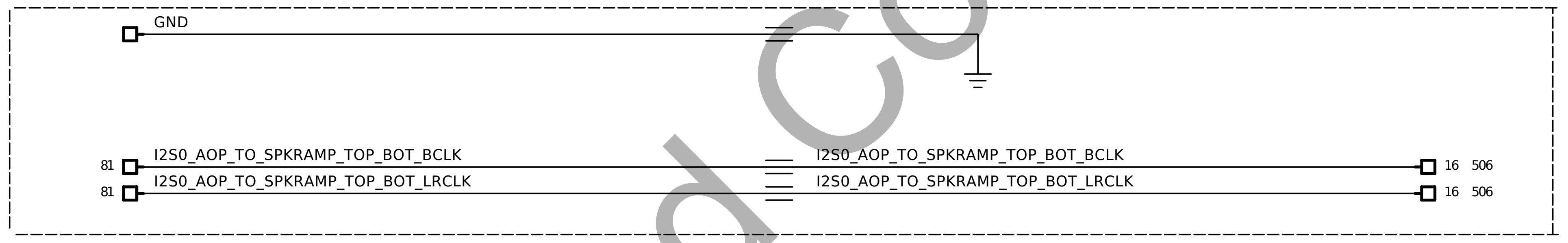
GRIMALDI


78 ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_P
ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_P 503
78 ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_N
ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_N 503
78 ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_P
ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_P 503
78 ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_N
ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_N 503

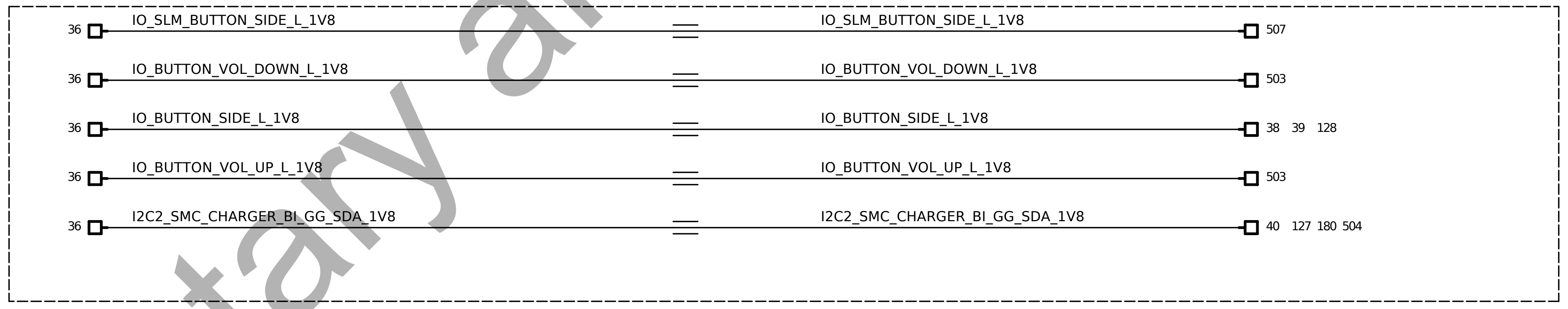
CAMERAS (DEV COMPATIBILITY)


53 55 507 PP1V825_CAM_PMU1_IO_SW
PP1V825_CAM_PMU1_IO_SW 55
PP1V825_CAM_PMU1_IO_SW 70

MISC


GND
81 I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK
I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK 16 506
81 I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK
I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK 16 506

PMU SLM


36 IO_SLM_BUTTON_SIDE_L_1V8
IO_SLM_BUTTON_SIDE_L_1V8 507
36 IO_BUTTON_VOL_DOWN_L_1V8
IO_BUTTON_VOL_DOWN_L_1V8 503
36 IO_BUTTON_SIDE_L_1V8
IO_BUTTON_SIDE_L_1V8 38 39 128
36 IO_BUTTON_VOL_UP_L_1V8
IO_BUTTON_VOL_UP_L_1V8 503
36 I2C2_SMC_CHARGER_BI_GG_SDA_1V8
I2C2_SMC_CHARGER_BI_GG_SDA_1V8 40 127 180 504

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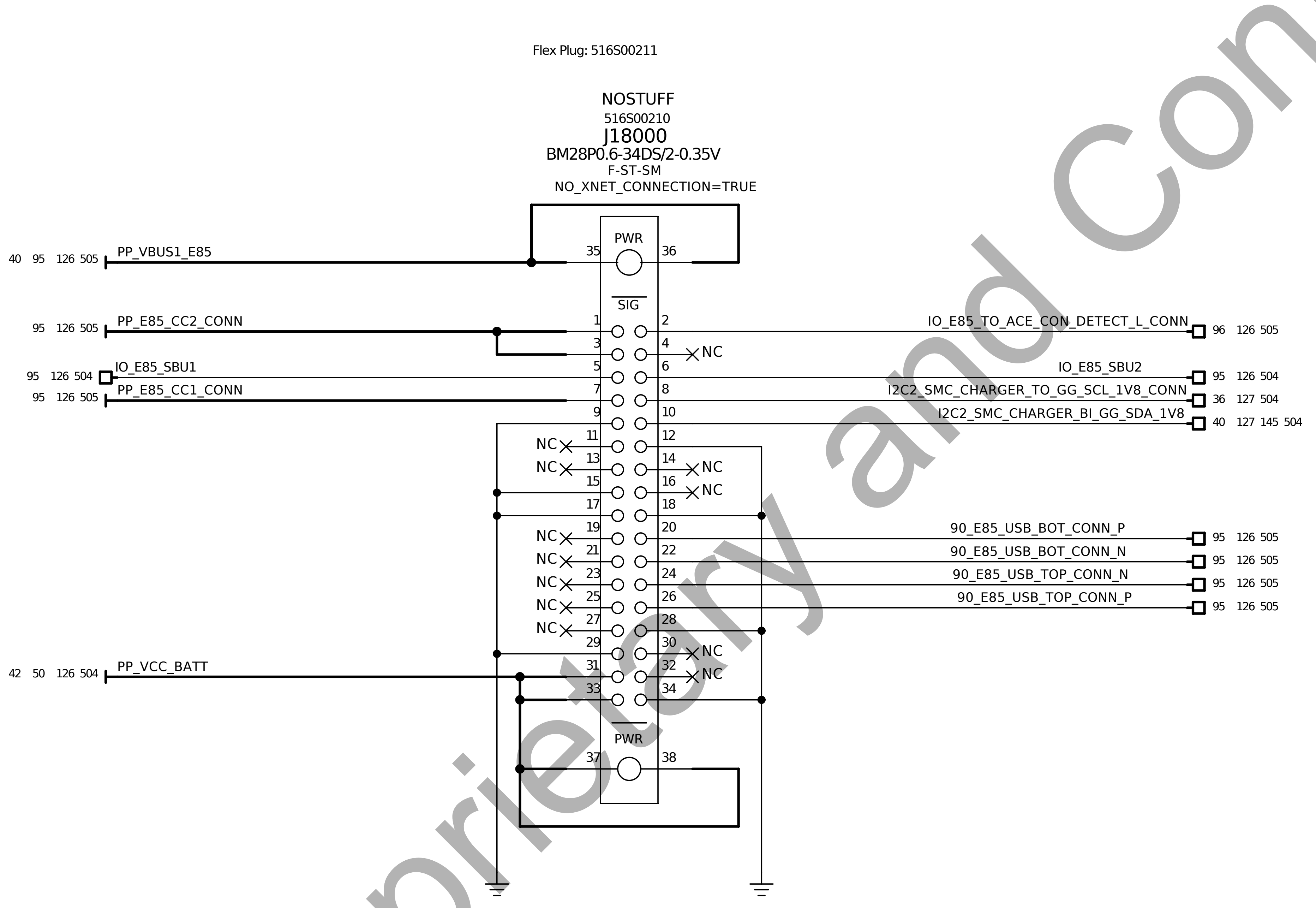
DEBUG CONNECTORS

Dock Jumper B2B

Battery B2B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516S00210
J18000
BM28P0.6-34DS/2-0.35V
F-ST-SM
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PWR
SIG
PWR
40 95 126 505 PP_VBUS1_E85
95 126 505 PP_E85_CC2_CONN
95 126 504 IO_E85_SBU1
95 126 505 PP_E85_CC1_CONN
42 50 126 504 PP_VCC_BATT
IO_E85_TO_ACE_CON_DETECT_L_CONN 96 126 505
IO_E85_SBU2 95 126 504
I2C2_SMC_CHARGER_TO_GG_SCL_1V8_CONN 36 127 504
I2C2_SMC_CHARGER_BI_GG_SDA_1V8 40 127 145 504
90_E85_USB_BOT_CONN_P 95 126 505
90_E85_USB_BOT_CONN_N 95 126 505
90_E85_USB_TOP_CONN_N 95 126 505
90_E85_USB_TOP_CONN_P 95 126 505
35 36
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
37 38
NC

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DEBUG: E85 + Battery B2B (180)

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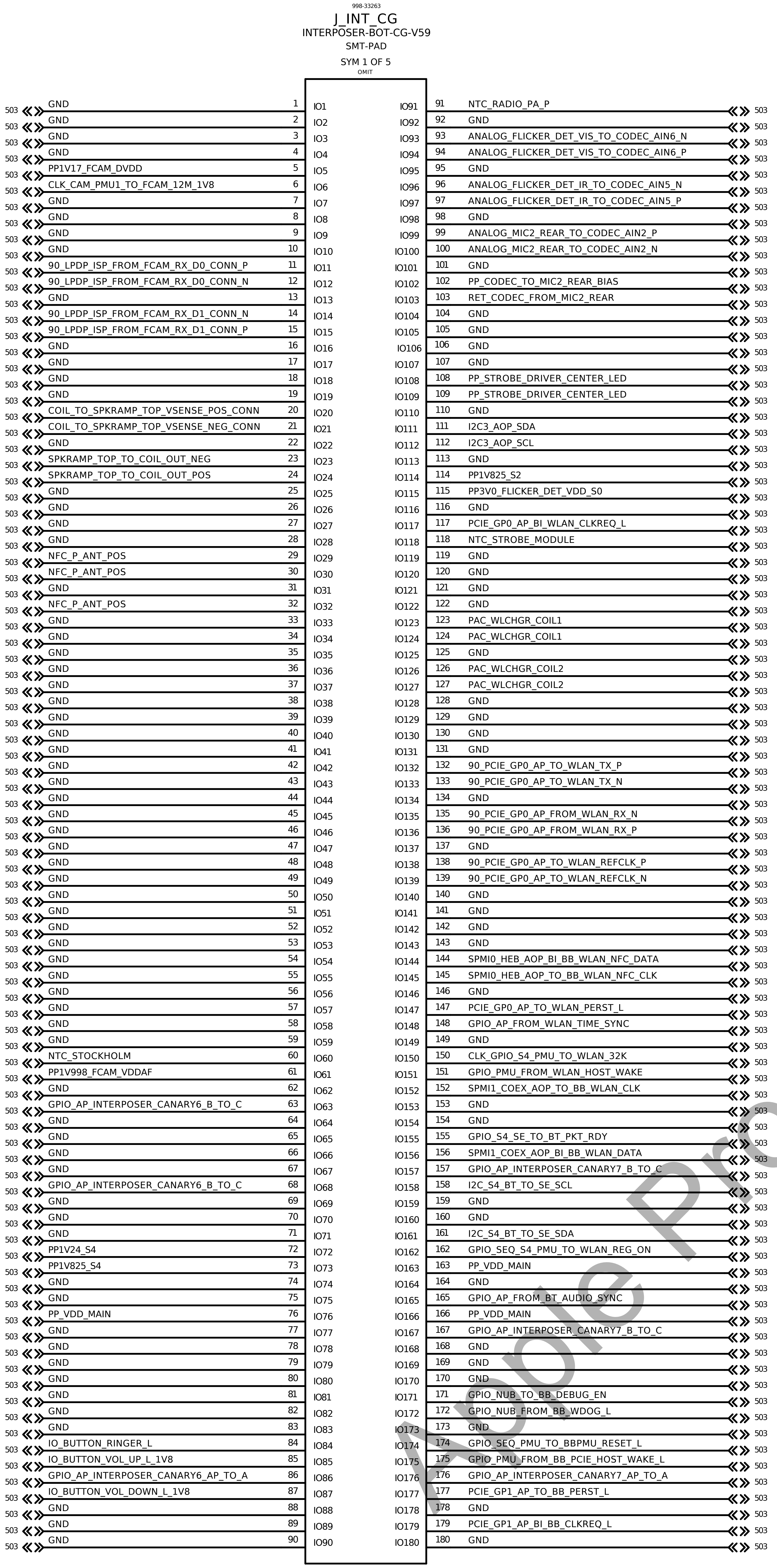

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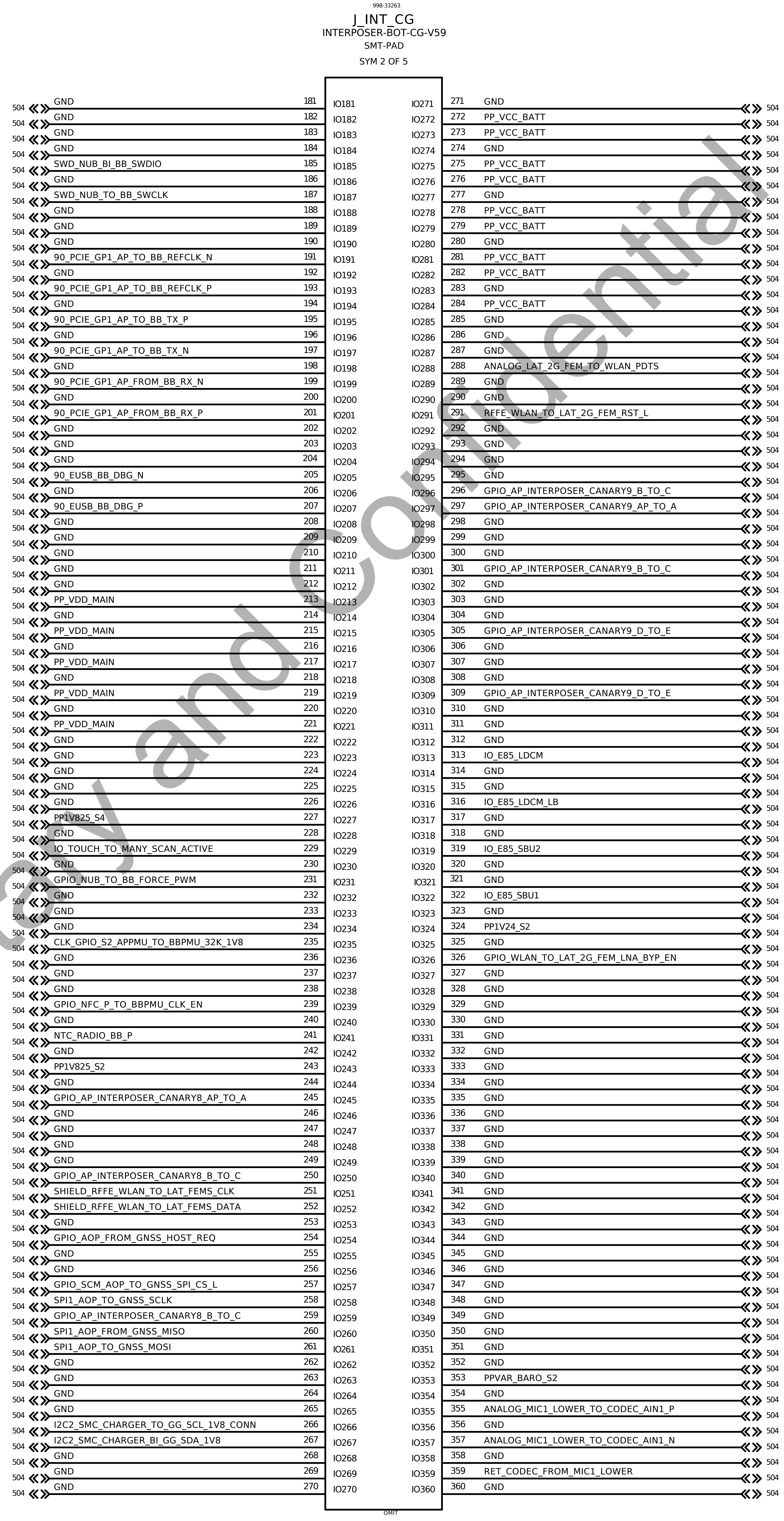
J_INT_CG
INTERPOSER-BOT-CG-V59
SMT-PAD
SYM 1 OF 5
OMIT

Page	Net	Pin	IO	IO	Pin	Net	Page
503	GND	1	IO1	IO91	91	NTC_RADIO_PA_P	503
503	GND	2	IO2	IO92	92	GND	503
503	GND	3	IO3	IO93	93	ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_N	503
503	GND	4	IO4	IO94	94	ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_P	503
503	PP1V17_FCAM_DVDD	5	IO5	IO95	95	GND	503
503	CLK_CAM_PMU1_TO_FCAM_12M_1V8	6	IO6	IO96	96	ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_N	503
503	GND	7	IO7	IO97	97	ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_P	503
503	GND	8	IO8	IO98	98	GND	503
503	GND	9	IO9	IO99	99	ANALOG_MIC2_REAR_TO_CODEC_AIN2_P	503
503	GND	10	IO10	IO100	100	ANALOG_MIC2_REAR_TO_CODEC_AIN2_N	503
503	90_LPDP_ISP_FROM_FCAM_RX_D0_CONN_P	11	IO11	IO101	101	GND	503
503	90_LPDP_ISP_FROM_FCAM_RX_D0_CONN_N	12	IO12	IO102	102	PP_CODEC_TO_MIC2_REAR_BIAS	503
503	GND	13	IO13	IO103	103	RET_CODEC_FROM_MIC2_REAR	503
503	90_LPDP_ISP_FROM_FCAM_RX_D1_CONN_N	14	IO14	IO104	104	GND	503
503	90_LPDP_ISP_FROM_FCAM_RX_D1_CONN_P	15	IO15	IO105	105	GND	503
503	GND	16	IO16	IO106	106	GND	503
503	GND	17	IO17	IO107	107	GND	503
503	GND	18	IO18	IO108	108	PP_STROBE_DRIVER_CENTER_LED	503
503	GND	19	IO19	IO109	109	PP_STROBE_DRIVER_CENTER_LED	503
503	COIL_TO_SPKRAMP_TOP_VSENSE_POS_CONN	20	IO20	IO110	110	GND	503
503	COIL_TO_SPKRAMP_TOP_VSENSE_NEG_CONN	21	IO21	IO111	111	I2C3_AOP_SDA	503
503	GND	22	IO22	IO112	112	I2C3_AOP_SCL	503
503	SPKRAMP_TOP_TO_COIL_OUT_NEG	23	IO23	IO113	113	GND	503
503	SPKRAMP_TOP_TO_COIL_OUT_POS	24	IO24	IO114	114	PP1V825_S2	503
503	GND	25	IO25	IO115	115	PP3V0_FLICKER_DET_VDD_S0	503
503	GND	26	IO26	IO116	116	GND	503
503	GND	27	IO27	IO117	117	PCIE_GP0_AP_BI_WLAN_CLKREQ_L	503
503	GND	28	IO28	IO118	118	NTC_STROBE_MODULE	503
503	NFC_P_ANT_POS	29	IO29	IO119	119	GND	503
503	NFC_P_ANT_POS	30	IO30	IO120	120	GND	503
503	GND	31	IO31	IO121	121	GND	503
503	NFC_P_ANT_POS	32	IO32	IO122	122	GND	503
503	GND	33	IO33	IO123	123	PAC_WLCHGR_COIL1	503
503	GND	34	IO34	IO124	124	PAC_WLCHGR_COIL1	503
503	GND	35	IO35	IO125	125	GND	503
503	GND	36	IO36	IO126	126	PAC_WLCHGR_COIL2	503
503	GND	37	IO37	IO127	127	PAC_WLCHGR_COIL2	503
503	GND	38	IO38	IO128	128	GND	503
503	GND	39	IO39	IO129	129	GND	503
503	GND	40	IO40	IO130	130	GND	503
503	GND	41	IO41	IO131	131	GND	503
503	GND	42	IO42	IO132	132	90_PCIE_GP0_AP_TO_WLAN_TX_P	503
503	GND	43	IO43	IO133	133	90_PCIE_GP0_AP_TO_WLAN_TX_N	503
503	GND	44	IO44	IO134	134	GND	503
503	GND	45	IO45	IO135	135	90_PCIE_GP0_AP_FROM_WLAN_RX_N	503
503	GND	46	IO46	IO136	136	90_PCIE_GP0_AP_FROM_WLAN_RX_P	503
503	GND	47	IO47	IO137	137	GND	503
503	GND	48	IO48	IO138	138	90_PCIE_GP0_AP_TO_WLAN_REFCLK_P	503
503	GND	49	IO49	IO139	139	90_PCIE_GP0_AP_TO_WLAN_REFCLK_N	503
503	GND	50	IO50	IO140	140	GND	503
503	GND	51	IO51	IO141	141	GND	503
503	GND	52	IO52	IO142	142	GND	503
503	GND	53	IO53	IO143	143	GND	503
503	GND	54	IO54	IO144	144	SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA	503
503	GND	55	IO55	IO145	145	SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK	503
503	GND	56	IO56	IO146	146	GND	503
503	GND	57	IO57	IO147	147	PCIE_GP0_AP_TO_WLAN_PERST_L	503
503	GND	58	IO58	IO148	148	GPIO_AP_FROM_WLAN_TIME_SYNC	503
503	GND	59	IO59	IO149	149	GND	503
503	NTC_STOCKHOLM	60	IO60	IO150	150	CLK_GPIO_S4_PMU_TO_WLAN_32K	503
503	PP1V998_FCAM_VDDAF	61	IO61	IO151	151	GPIO_PMU_FROM_WLAN_HOST_WAKE	503
503	GND	62	IO62	IO152	152	SPMI1_COEX_AOP_TO_BB_WLAN_CLK	503
503	GPIO_AP_INTERPOSER_CANARY6_B_TO_C	63	IO63	IO153	153	GND	503
503	GND	64	IO64	IO154	154	GND	503
503	GND	65	IO65	IO155	155	GPIO_S4_SE_TO_BT_PKT_RDY	503
503	GND	66	IO66	IO156	156	SPMI1_COEX_AOP_BI_BB_WLAN_DATA	503
503	GND	67	IO67	IO157	157	GPIO_AP_INTERPOSER_CANARY7_B_TO_C	503
503	GPIO_AP_INTERPOSER_CANARY6_B_TO_C	68	IO68	IO158	158	I2C_S4_BT_TO_SE_SCL	503
503	GND	69	IO69	IO159	159	GND	503
503	GND	70	IO70	IO160	160	GND	503
503	GND	71	IO71	IO161	161	I2C_S4_BT_TO_SE_SDA	503
503	PP1V24_S4	72	IO72	IO162	162	GPIO_SEQ_S4_PMU_TO_WLAN_REG_ON	503
503	PP1V825_S4	73	IO73	IO163	163	PP_VDD_MAIN	503
503	GND	74	IO74	IO164	164	GND	503
503	GND	75	IO75	IO165	165	GPIO_AP_FROM_BT_AUDIO_SYNC	503
503	PP_VDD_MAIN	76	IO76	IO166	166	PP_VDD_MAIN	503
503	GND	77	IO77	IO167	167	GPIO_AP_INTERPOSER_CANARY7_B_TO_C	503
503	GND	78	IO78	IO168	168	GND	503
503	GND	79	IO79	IO169	169	GND	503
503	GND	80	IO80	IO170	170	GND	503
503	GND	81	IO81	IO171	171	GPIO_NUB_TO_BB_DEBUG_EN	503
503	GND	82	IO82	IO172	172	GPIO_NUB_FROM_BB_WDOG_L	503
503	GND	83	IO83	IO173	173	GND	503
503	IO_BUTTON_RINGER_L	84	IO84	IO174	174	GPIO_SEQ_PMU_TO_BBPMU_RESET_L	503
503	IO_BUTTON_VOL_UP_L_1V8	85	IO85	IO175	175	GPIO_PMU_FROM_BB_PCIE_HOST_WAKE_L	503
503	GPIO_AP_INTERPOSER_CANARY6_AP_TO_A	86	IO86	IO176	176	GPIO_AP_INTERPOSER_CANARY7_AP_TO_A	503
503	IO_BUTTON_VOL_DOWN_L_1V8	87	IO87	IO177	177	PCIE_GP1_AP_TO_BB_PERST_L	503
503	GND	88	IO88	IO178	178	GND	503
503	GND	89	IO89	IO179	179	PCIE_GP1_AP_BI_BB_CLKREQ_L	503
503	GND	90	IO90	IO180	180	GND	503



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Page	Net	Pin	IO	IO	Pin	Net	Page
504	GND	181	IO181	IO271	271	GND	504
504	GND	182	IO182	IO272	272	PP_VCC_BATT	504
504	GND	183	IO183	IO273	273	PP_VCC_BATT	504
504	GND	184	IO184	IO274	274	GND	504
504	SWD_NUB_BI_BB_SWDIO	185	IO185	IO275	275	PP_VCC_BATT	504
504	GND	186	IO186	IO276	276	PP_VCC_BATT	504
504	SWD_NUB_TO_BB_SWCLK	187	IO187	IO277	277	GND	504
504	GND	188	IO188	IO278	278	PP_VCC_BATT	504
504	GND	189	IO189	IO279	279	PP_VCC_BATT	504
504	GND	190	IO190	IO280	280	GND	504
504	90_PCIE_GP1_AP_TO_BB_REFCLK_N	191	IO191	IO281	281	PP_VCC_BATT	504
504	GND	192	IO192	IO282	282	PP_VCC_BATT	504
504	90_PCIE_GP1_AP_TO_BB_REFCLK_P	193	IO193	IO283	283	GND	504
504	GND	194	IO194	IO284	284	PP_VCC_BATT	504
504	90_PCIE_GP1_AP_TO_BB_TX_P	195	IO195	IO285	285	GND	504
504	GND	196	IO196	IO286	286	GND	504
504	90_PCIE_GP1_AP_TO_BB_TX_N	197	IO197	IO287	287	GND	504
504	GND	198	IO198	IO288	288	ANALOG_LAT_2G_FEM_TO_WLAN_PDTS	504
504	90_PCIE_GP1_AP_FROM_BB_RX_N	199	IO199	IO289	289	GND	504
504	GND	200	IO200	IO290	290	GND	504
504	90_PCIE_GP1_AP_FROM_BB_RX_P	201	IO201	IO291	291	RFFE_WLAN_TO_LAT_2G_FEM_RST_L	504
504	GND	202	IO202	IO292	292	GND	504
504	GND	203	IO203	IO293	293	GND	504
504	GND	204	IO204	IO294	294	GND	504
504	90_EUSB_BB_DBG_N	205	IO205	IO295	295	GND	504
504	GND	206	IO206	IO296	296	GPIO_AP_INTERPOSER_CANARY9_B_TO_C	504
504	90_EUSB_BB_DBG_P	207	IO207	IO297	297	GPIO_AP_INTERPOSER_CANARY9_AP_TO_A	504
504	GND	208	IO208	IO298	298	GND	504
504	GND	209	IO209	IO299	299	GND	504
504	GND	210	IO210	IO300	300	GND	504
504	GND	211	IO211	IO301	301	GPIO_AP_INTERPOSER_CANARY9_B_TO_C	504
504	GND	212	IO212	IO302	302	GND	504
504	PP_VDD_MAIN	213	IO213	IO303	303	GND	504
504	GND	214	IO214	IO304	304	GND	504
504	PP_VDD_MAIN	215	IO215	IO305	305	GPIO_AP_INTERPOSER_CANARY9_D_TO_E	504
504	GND	216	IO216	IO306	306	GND	504
504	PP_VDD_MAIN	217	IO217	IO307	307	GND	504
504	GND	218	IO218	IO308	308	GND	504
504	PP_VDD_MAIN	219	IO219	IO309	309	GPIO_AP_INTERPOSER_CANARY9_D_TO_E	504
504	GND	220	IO220	IO310	310	GND	504
504	PP_VDD_MAIN	221	IO221	IO311	311	GND	504
504	GND	222	IO222	IO312	312	GND	504
504	GND	223	IO223	IO313	313	IO_E85_LDCM	504
504	GND	224	IO224	IO314	314	GND	504
504	GND	225	IO225	IO315	315	GND	504
504	GND	226	IO226	IO316	316	IO_E85_LDCM_LB	504
504	PP1V825_S4	227	IO227	IO317	317	GND	504
504	GND	228	IO228	IO318	318	GND	504
504	IO_TOUCH_TO_MANY_SCAN_ACTIVE	229	IO229	IO319	319	IO_E85_SBU2	504
504	GND	230	IO230	IO320	320	GND	504
504	GPIO_NUB_TO_BB_FORCE_PWM	231	IO231	IO321	321	GND	504
504	GND	232	IO232	IO322	322	IO_E85_SBU1	504
504	GND	233	IO233	IO323	323	GND	504
504	GND	234	IO234	IO324	324	PP1V24_S2	504
504	CLK_GPIO_S2_APPMU_TO_BBPMU_32K_1V8	235	IO235	IO325	325	GND	504
504	GND	236	IO236	IO326	326	GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN	504
504	GND	237	IO237	IO327	327	GND	504
504	GND	238	IO238	IO328	328	GND	504
504	GPIO_NFC_P_TO_BBPMU_CLK_EN	239	IO239	IO329	329	GND	504
504	GND	240	IO240	IO330	330	GND	504
504	NTC_RADIO_BB_P	241	IO241	IO331	331	GND	504
504	GND	242	IO242	IO332	332	GND	504
504	PP1V825_S2	243	IO243	IO333	333	GND	504
504	GND	244	IO244	IO334	334	GND	504
504	GPIO_AP_INTERPOSER_CANARY8_AP_TO_A	245	IO245	IO335	335	GND	504
504	GND	246	IO246	IO336	336	GND	504
504	GND	247	IO247	IO337	337	GND	504
504	GND	248	IO248	IO338	338	GND	504
504	GND	249	IO249	IO339	339	GND	504
504	GPIO_AP_INTERPOSER_CANARY8_B_TO_C	250	IO250	IO340	340	GND	504
504	SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK	251	IO251	IO341	341	GND	504
504	SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA	252	IO252	IO342	342	GND	504
504	GND	253	IO253	IO343	343	GND	504
504	GPIO_AOP_FROM_GNSS_HOST_REQ	254	IO254	IO344	344	GND	504
504	GND	255	IO255	IO345	345	GND	504
504	GND	256	IO256	IO346	346	GND	504
504	GPIO_SCM_AOP_TO_GNSS_SPI_CS_L	257	IO257	IO347	347	GND	504
504	SPI1_AOP_TO_GNSS_SCLK	258	IO258	IO348	348	GND	504
504	GPIO_AP_INTERPOSER_CANARY8_B_TO_C	259	IO259	IO349	349	GND	504
504	SPI1_AOP_FROM_GNSS_MISO	260	IO260	IO350	350	GND	504
504	SPI1_AOP_TO_GNSS_MOSI	261	IO261	IO351	351	GND	504
504	GND	262	IO262	IO352	352	GND	504
504	GND	263	IO263	IO353	353	PPVAR_BARO_S2	504
504	GND	264	IO264	IO354	354	GND	504
504	GND	265	IO265	IO355	355	ANALOG_MIC1_LOWER_TO_CODEC_AIN1_P	504
504	I2C2_SMC_CHARGER_TO_GG_SCL_1V8_CONN	266	IO266	IO356	356	GND	504
504	I2C2_SMC_CHARGER_BI_GG_SDA_1V8	267	IO267	IO357	357	ANALOG_MIC1_LOWER_TO_CODEC_AIN1_N	504
504	GND	268	IO268	IO358	358	GND	504
504	GND	269	IO269	IO359	359	RET_CODEC_FROM_MIC1_LOWER	504
504	GND	270	IO270	IO360	360	GND	504

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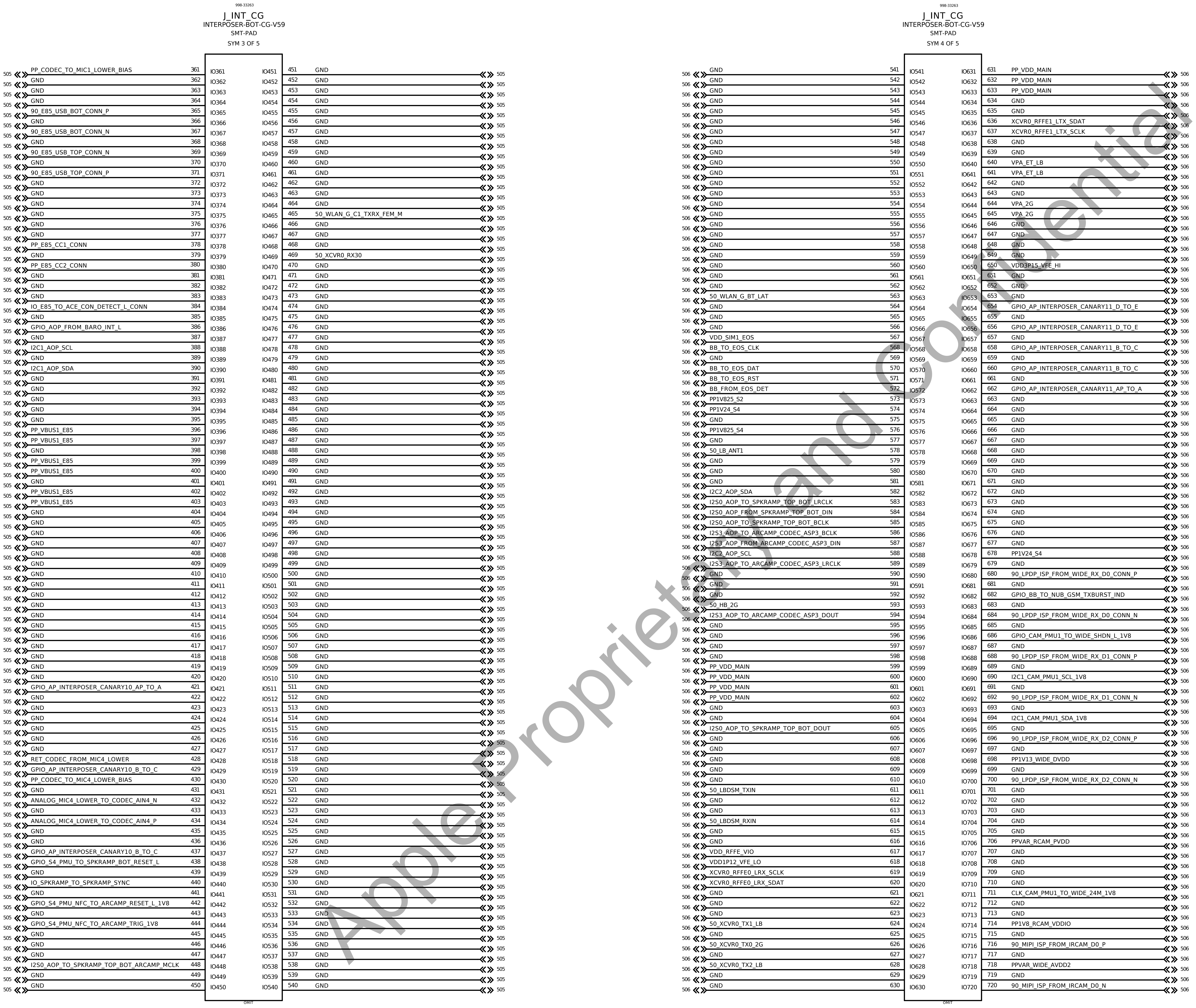
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361 PP_CODEC_TO_MIC1_LOWER_BIAS
362 GND
363 GND
364 GND
365 90_E85_USB_BOT_CONN_P
366 GND
367 90_E85_USB_BOT_CONN_N
368 GND
369 90_E85_USB_TOP_CONN_N
370 GND
371 90_E85_USB_TOP_CONN_P
372 GND
373 GND
374 GND
375 GND
376 GND
377 GND
378 PP_E85_CC1_CONN
379 GND
380 PP_E85_CC2_CONN
381 GND
382 GND
383 GND
384 IO_E85_TO_ACE_CON_DETECT_L_CONN
385 GND
386 GPIO_AOP_FROM_BARO_INT_L
387 GND
388 I2C1_AOP_SCL
389 GND
390 I2C1_AOP_SDA
391 GND
392 GND
393 GND
394 GND
395 GND
396 PP_VBUS1_E85
397 PP_VBUS1_E85
398 GND
399 PP_VBUS1_E85
400 PP_VBUS1_E85
401 GND
402 PP_VBUS1_E85
403 PP_VBUS1_E85
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421 GPIO_AP_INTERPOSER_CANARY10_AP_TO_A
422 GND
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427 GND
428 RET_CODEC_FROM_MIC4_LOWER
429 GPIO_AP_INTERPOSER_CANARY10_B_TO_C
430 PP_CODEC_TO_MIC4_LOWER_BIAS
431 GND
432 ANALOG_MIC4_LOWER_TO_CODEC_AIN4_N
433 GND
434 ANALOG_MIC4_LOWER_TO_CODEC_AIN4_P
435 GND
436 GND
437 GPIO_AP_INTERPOSER_CANARY10_B_TO_C
438 GPIO_S4_PMU_TO_SPKRAMP_BOT_RESET_L
439 GND
440 IO_SPKRAMP_TO_SPKRAMP_SYNC
441 GND
442 GPIO_S4_PMU_NFC_TO_ARCAMP_RESET_L_1V8
443 GND
444 GPIO_S4_PMU_NFC_TO_ARCAMP_TRIG_1V8
445 GND
446 GND
447 GND
448 I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK
449 GND
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455 GND
456 GND
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459 GND
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461 GND
462 GND
463 GND
464 GND
465 50_WLAN_G_C1_TXRX_FEM_M
466 GND
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469 50_XCVR0_RX30
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560 GND
561 GND
562 GND
563 50_WLAN_G_BT_LAT
564 GND
565 GND
566 GND
567 VDD_SIM1_EOS
568 BB_TO_EOS_CLK
569 GND
570 BB_TO_EOS_DAT
571 BB_TO_EOS_RST
572 BB_FROM_EOS_DET
573 PP1V825_S2
574 PP1V24_S4
575 GND
576 PP1V825_S4
577 GND
578 50_LB_ANT1
579 GND
580 GND
581 GND
582 I2C2_AOP_SDA
583 I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK
584 I2S0_AOP_FROM_SPKRAMP_TOP_BOT_DIN
585 I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK
586 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK
587 I2S3_AOP_FROM_ARCAMP_CODEC_ASP3_DIN
588 I2C2_AOP_SCL
589 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_LRCLK
590 GND
591 GND
592 GND
593 50_HB_2G
594 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_DOUT
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598 GND
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600 PP_VDD_MAIN
601 PP_VDD_MAIN
602 PP_VDD_MAIN
603 GND
604 GND
605 I2S0_AOP_TO_SPKRAMP_TOP_BOT_DOUT
606 GND
607 GND
608 GND
609 GND
610 GND
611 50_LBDSM_TXIN
612 GND
613 GND
614 50_LBDSM_RXIN
615 GND
616 GND
617 VDD_RFFE_VIO
618 VDD1P12_VFE_LO
619 XCVR0_RFFE0_LRX_SCLK
620 XCVR0_RFFE0_LRX_SDAT
621 GND
622 GND
623 GND
624 50_XCVR0_TX1_LB
625 GND
626 50_XCVR0_TX0_2G
627 GND
628 50_XCVR0_TX2_LB
629 GND
630 GND
631 PP_VDD_MAIN
632 PP_VDD_MAIN
633 PP_VDD_MAIN
634 GND
635 GND
636 XCVR0_RFFE1_LTX_SDAT
637 XCVR0_RFFE1_LTX_SCLK
638 GND
639 GND
640 VPA_ET_LB
641 VPA_ET_LB
642 GND
643 GND
644 VPA_2G
645 VPA_2G
646 GND
647 GND
648 GND
649 GND
650 VDD3P15_VFE_HI
651 GND
652 GND
653 GND
654 GPIO_AP_INTERPOSER_CANARY11_D_TO_E
655 GND
656 GPIO_AP_INTERPOSER_CANARY11_D_TO_E
657 GND
658 GPIO_AP_INTERPOSER_CANARY11_B_TO_C
659 GND
660 GPIO_AP_INTERPOSER_CANARY11_B_TO_C
661 GND
662 GPIO_AP_INTERPOSER_CANARY11_AP_TO_A
663 GND
664 GND
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672 GND
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675 GND
676 GND
677 GND
678 PP1V24_S4
679 GND
680 90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_P
681 GND
682 GPIO_BB_TO_NUB_GSM_TXBURST_IND
683 GND
684 90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_N
685 GND
686 GPIO_CAM_PMU1_TO_WIDE_SHDN_L_1V8
687 GND
688 90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_P
689 GND
690 I2C1_CAM_PMU1_SCL_1V8
691 GND
692 90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_N
693 GND
694 I2C1_CAM_PMU1_SDA_1V8
695 GND
696 90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_P
697 GND
698 PP1V13_WIDE_DVDD
699 GND
700 90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_N
701 GND
702 GND
703 GND
704 GND
705 GND
706 PPVAR_RCAM_PVDD
707 GND
708 GND
709 GND
710 GND
711 CLK_CAM_PMU1_TO_WIDE_24M_1V8
712 GND
713 GND
714 PP1V8_RCAM_VDDIO
715 GND
716 90_MIPI_ISP_FROM_IRCAM_D0_P
717 GND
718 PPVAR_WIDE_AVDD2
719 GND
720 90_MIPI_ISP_FROM_IRCAM_D0_N
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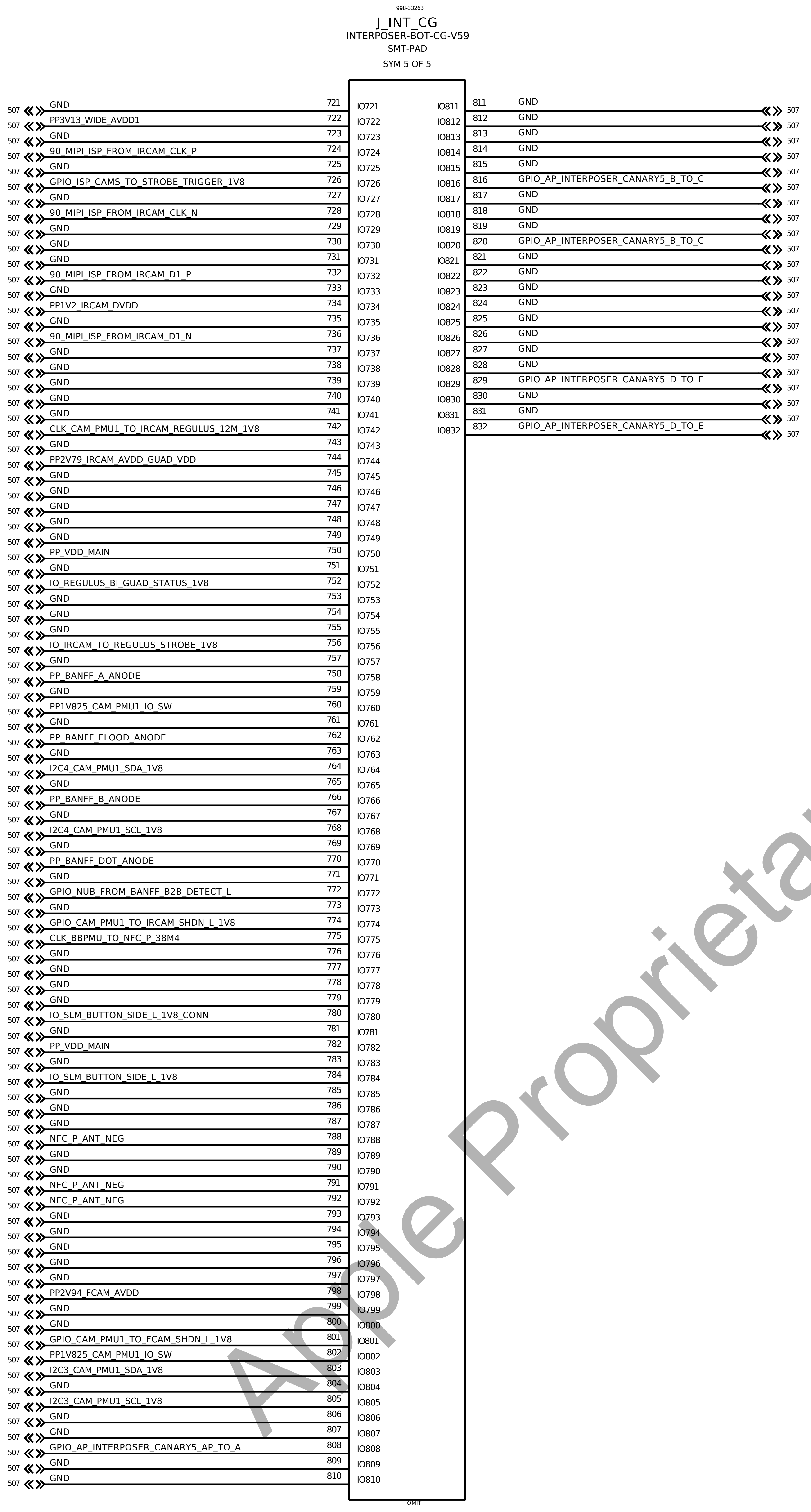

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507	GND	721	IO721
507	PP3V13_WIDE_AVDD1	722	IO722
507	GND	723	IO723
507	90_MIPI_ISP_FROM_IRCAM_CLK_P	724	IO724
507	GND	725	IO725
507	GPIO_ISP_CAMS_TO_STROBE_TRIGGER_1V8	726	IO726
507	GND	727	IO727
507	90_MIPI_ISP_FROM_IRCAM_CLK_N	728	IO728
507	GND	729	IO729
507	GND	730	IO730
507	GND	731	IO731
507	90_MIPI_ISP_FROM_IRCAM_D1_P	732	IO732
507	GND	733	IO733
507	PP1V2_IRCAM_DVDD	734	IO734
507	GND	735	IO735
507	90_MIPI_ISP_FROM_IRCAM_D1_N	736	IO736
507	GND	737	IO737
507	GND	738	IO738
507	GND	739	IO739
507	GND	740	IO740
507	GND	741	IO741
507	CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8	742	IO742
507	GND	743	IO743
507	PP2V79_IRCAM_AVDD_GUAD_VDD	744	IO744
507	GND	745	IO745
507	GND	746	IO746
507	GND	747	IO747
507	GND	748	IO748
507	GND	749	IO749
507	PP_VDD_MAIN	750	IO750
507	GND	751	IO751
507	IO_REGULUS_BI_GUAD_STATUS_1V8	752	IO752
507	GND	753	IO753
507	GND	754	IO754
507	GND	755	IO755
507	IO_IRCAM_TO_REGULUS_STROBE_1V8	756	IO756
507	GND	757	IO757
507	PP_BANFF_A_ANODE	758	IO758
507	GND	759	IO759
507	PP1V825_CAM_PMU1_IO_SW	760	IO760
507	GND	761	IO761
507	PP_BANFF_FLOOD_ANODE	762	IO762
507	GND	763	IO763
507	I2C4_CAM_PMU1_SDA_1V8	764	IO764
507	GND	765	IO765
507	PP_BANFF_B_ANODE	766	IO766
507	GND	767	IO767
507	I2C4_CAM_PMU1_SCL_1V8	768	IO768
507	GND	769	IO769
507	PP_BANFF_DOT_ANODE	770	IO770
507	GND	771	IO771
507	GPIO_NUB_FROM_BANFF_B2B_DETECT_L	772	IO772
507	GND	773	IO773
507	GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8	774	IO774
507	CLK_BBPMU_TO_NFC_P_38M4	775	IO775
507	GND	776	IO776
507	GND	777	IO777
507	GND	778	IO778
507	GND	779	IO779
507	IO_SLM_BUTTON_SIDE_L_1V8_CONN	780	IO780
507	GND	781	IO781
507	PP_VDD_MAIN	782	IO782
507	GND	783	IO783
507	IO_SLM_BUTTON_SIDE_L_1V8	784	IO784
507	GND	785	IO785
507	GND	786	IO786
507	GND	787	IO787
507	NFC_P_ANT_NEG	788	IO788
507	GND	789	IO789
507	GND	790	IO790
507	NFC_P_ANT_NEG	791	IO791
507	NFC_P_ANT_NEG	792	IO792
507	GND	793	IO793
507	GND	794	IO794
507	GND	795	IO795
507	GND	796	IO796
507	GND	797	IO797
507	PP2V94_FCAM_AVDD	798	IO798
507	GND	799	IO799
507	GND	800	IO800
507	GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8	801	IO801
507	PP1V825_CAM_PMU1_IO_SW	802	IO802
507	I2C3_CAM_PMU1_SDA_1V8	803	IO803
507	GND	804	IO804
507	I2C3_CAM_PMU1_SCL_1V8	805	IO805
507	GND	806	IO806
507	GND	807	IO807
507	GPIO_AP_INTERPOSER_CANARY5_AP_TO_A	808	IO808
507	GND	809	IO809
507	GND	810	IO810

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IO811	811	GND	507
IO812	812	GND	507
IO813	813	GND	507
IO814	814	GND	507
IO815	815	GND	507
IO816	816	GPIO_AP_INTERPOSER_CANARY5_B_TO_C	507
IO817	817	GND	507
IO818	818	GND	507
IO819	819	GND	507
IO820	820	GPIO_AP_INTERPOSER_CANARY5_B_TO_C	507
IO821	821	GND	507
IO822	822	GND	507
IO823	823	GND	507
IO824	824	GND	507
IO825	825	GND	507
IO826	826	GND	507
IO827	827	GND	507
IO828	828	GND	507
IO829	829	GPIO_AP_INTERPOSER_CANARY5_D_TO_E	507
IO830	830	GND	507
IO831	831	GND	507
IO832	832	GPIO_AP_INTERPOSER_CANARY5_D_TO_E	507

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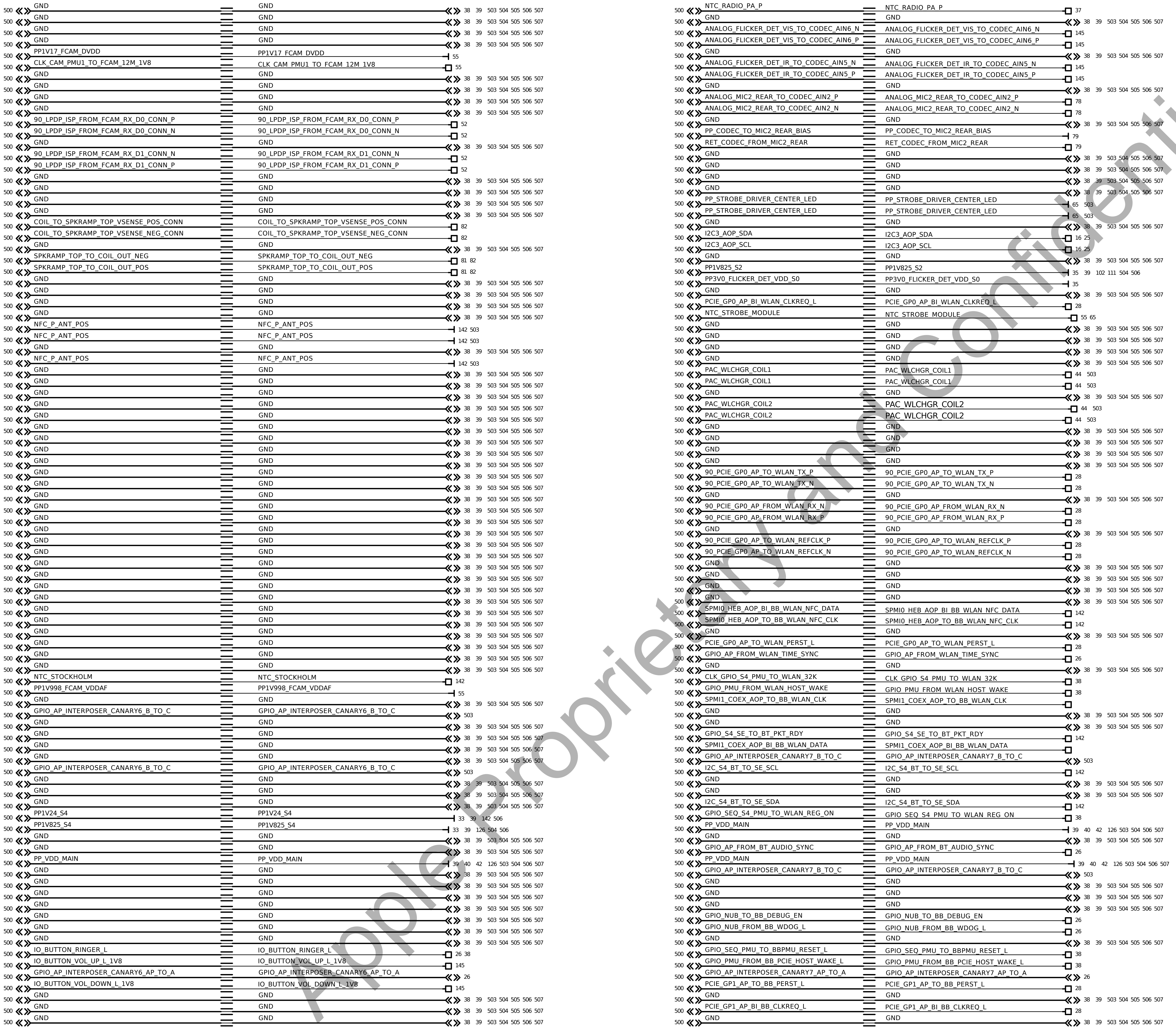
GND
PP1V17_FCAM_DVDD
CLK_CAM_PMU1_TO_FCAM_12M_1V8
90_LPDP_ISP_FROM_FCAM_RX_D0_CONN_P
90_LPDP_ISP_FROM_FCAM_RX_D0_CONN_N
90_LPDP_ISP_FROM_FCAM_RX_D1_CONN_N
90_LPDP_ISP_FROM_FCAM_RX_D1_CONN_P
COIL_TO_SPKRAMP_TOP_VSENSE_POS_CONN
COIL_TO_SPKRAMP_TOP_VSENSE_NEG_CONN
SPKRAMP_TOP_TO_COIL_OUT_NEG
SPKRAMP_TOP_TO_COIL_OUT_POS
NFC_P_ANT_POS
NTC_STOCKHOLM
PP1V998_FCAM_VDDAF
GPIO_AP_INTERPOSER_CANARY6_B_TO_C
PP1V24_S4
PP1V825_S4
PP_VDD_MAIN
IO_BUTTON_RINGER_L
IO_BUTTON_VOL_UP_L_1V8
GPIO_AP_INTERPOSER_CANARY6_AP_TO_A
IO_BUTTON_VOL_DOWN_L_1V8
NTC_RADIO_PA_P
ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_N
ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_P
ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_N
ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_P
ANALOG_MIC2_REAR_TO_CODEC_AIN2_P
ANALOG_MIC2_REAR_TO_CODEC_AIN2_N
PP_CODEC_TO_MIC2_REAR_BIAS
RET_CODEC_FROM_MIC2_REAR
PP_STROBE_DRIVER_CENTER_LED
I2C3_AOP_SDA
I2C3_AOP_SCL
PP1V825_S2
PP3V0_FLICKER_DET_VDD_S0
PCIE_GP0_AP_BI_WLAN_CLKREQ_L
NTC_STROBE_MODULE
PAC_WLCHGR_COIL1
PAC_WLCHGR_COIL2
90_PCIE_GP0_AP_TO_WLAN_TX_P
90_PCIE_GP0_AP_TO_WLAN_TX_N
90_PCIE_GP0_AP_FROM_WLAN_RX_N
90_PCIE_GP0_AP_FROM_WLAN_RX_P
90_PCIE_GP0_AP_TO_WLAN_REFCLK_P
90_PCIE_GP0_AP_TO_WLAN_REFCLK_N
SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA
SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
PCIE_GP0_AP_TO_WLAN_PERST_L
GPIO_AP_FROM_WLAN_TIME_SYNC
CLK_GPIO_S4_PMU_TO_WLAN_32K
GPIO_PMU_FROM_WLAN_HOST_WAKE
SPMI1_COEX_AOP_TO_BB_WLAN_CLK
GPIO_S4_SE_TO_BT_PKT_RDY
SPMI1_COEX_AOP_BI_BB_WLAN_DATA
GPIO_AP_INTERPOSER_CANARY7_B_TO_C
I2C_S4_BT_TO_SE_SCL
I2C_S4_BT_TO_SE_SDA
GPIO_SEQ_S4_PMU_TO_WLAN_REG_ON
GPIO_AP_FROM_BT_AUDIO_SYNC
GPIO_NUB_TO_BB_DEBUG_EN
GPIO_NUB_FROM_BB_WDOG_L
GPIO_SEQ_PMU_TO_BBPMU_RESET_L
GPIO_PMU_FROM_BB_PCIE_HOST_WAKE_L
GPIO_AP_INTERPOSER_CANARY7_AP_TO_A
PCIE_GP1_AP_TO_BB_PERST_L
PCIE_GP1_AP_BI_BB_CLKREQ_L
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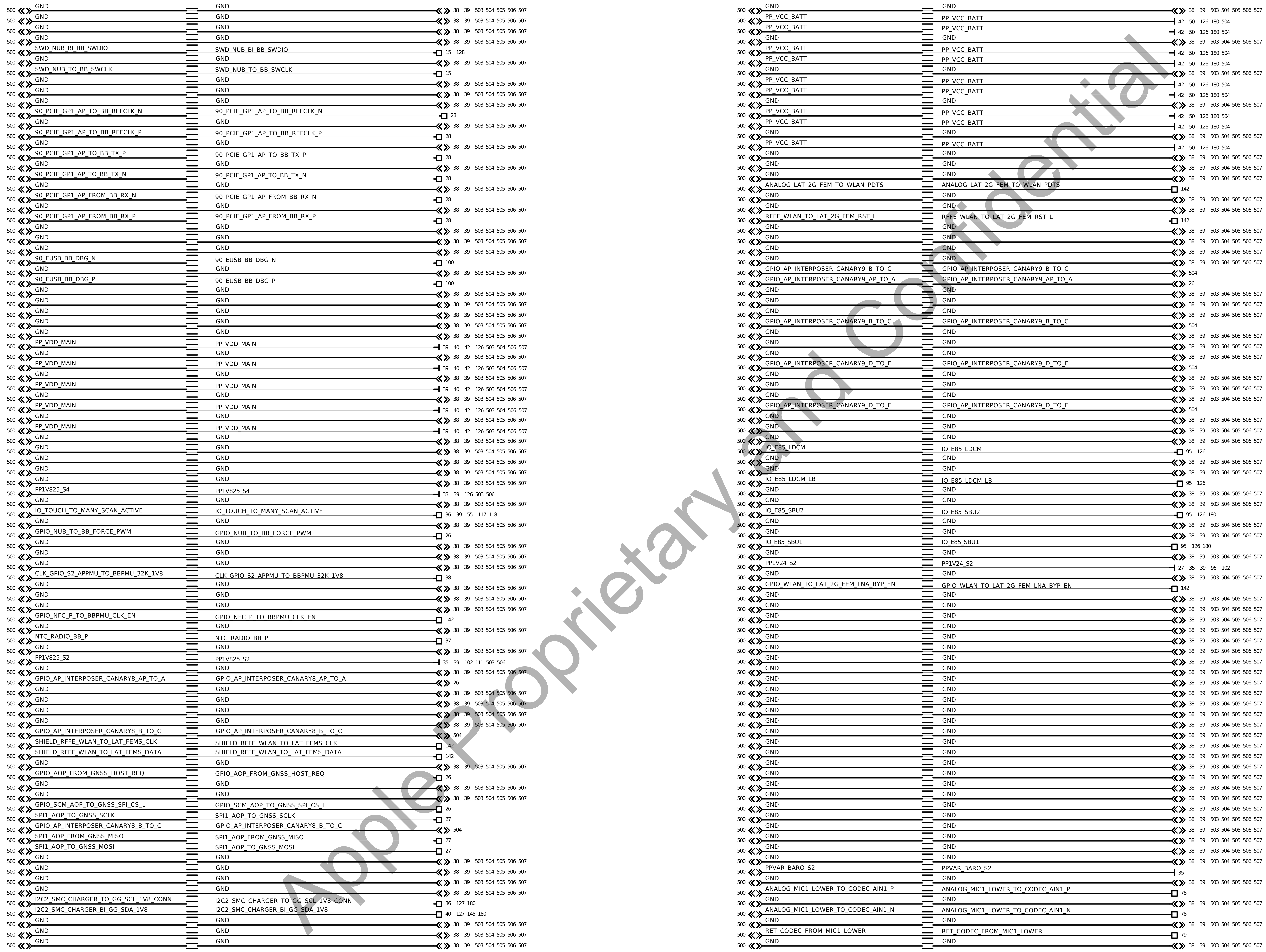

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500 GND GND 38 39 503 504 505 506 507
500 SWD_NUB_TO_BB_SWCLK SWD_NUB_TO_BB_SWCLK 15
500 GND GND 38 39 503 504 505 506 507
500 GND GND 38 39 503 504 505 506 507
500 GND GND 38 39 503 504 505 506 507
500 90_PCIE_GP1_AP_TO_BB_REFCLK_N 90_PCIE_GP1_AP_TO_BB_REFCLK_N 28
500 GND GND 38 39 503 504 505 506 507
500 90_PCIE_GP1_AP_TO_BB_REFCLK_P 90_PCIE_GP1_AP_TO_BB_REFCLK_P 28
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500 90_PCIE_GP1_AP_TO_BB_TX_P 90_PCIE_GP1_AP_TO_BB_TX_P 28
500 GND GND 38 39 503 504 505 506 507
500 90_PCIE_GP1_AP_TO_BB_TX_N 90_PCIE_GP1_AP_TO_BB_TX_N 28
500 GND GND 38 39 503 504 505 506 507
500 90_PCIE_GP1_AP_FROM_BB_RX_N 90_PCIE_GP1_AP_FROM_BB_RX_N 28
500 GND GND 38 39 503 504 505 506 507
500 90_PCIE_GP1_AP_FROM_BB_RX_P 90_PCIE_GP1_AP_FROM_BB_RX_P 28
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500 90_EUSB_BB_DBG_P 90_EUSB_BB_DBG_P 100
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500 GND GND 38 39 503 504 505 506 507
500 PP_VDD_MAIN PP_VDD_MAIN 39 40 42 126 503 504 506 507
500 GND GND 38 39 503 504 505 506 507
500 PP_VDD_MAIN PP_VDD_MAIN 39 40 42 126 503 504 506 507
500 GND GND 38 39 503 504 505 506 507
500 PP_VDD_MAIN PP_VDD_MAIN 39 40 42 126 503 504 506 507
500 GND GND 38 39 503 504 505 506 507
500 PP_VDD_MAIN PP_VDD_MAIN 39 40 42 126 503 504 506 507
500 GND GND 38 39 503 504 505 506 507
500 PP_VDD_MAIN PP_VDD_MAIN 39 40 42 126 503 504 506 507
500 GND GND 38 39 503 504 505 506 507
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500 GND GND 38 39 503 504 505 506 507
500 GND GND 38 39 503 504 505 506 507
500 GND GND 38 39 503 504 505 506 507
500 PP1V825_S4 PP1V825_S4 33 39 126 503 506
500 GND GND 38 39 503 504 505 506 507
500 IO_TOUCH_TO_MANY_SCAN_ACTIVE IO_TOUCH_TO_MANY_SCAN_ACTIVE 36 39 55 117 118
500 GND GND 38 39 503 504 505 506 507
500 GPIO_NUB_TO_BB_FORCE_PWM GPIO_NUB_TO_BB_FORCE_PWM 26
500 GND GND 38 39 503 504 505 506 507
500 GND GND 38 39 503 504 505 506 507
500 GND GND 38 39 503 504 505 506 507
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500 GND GND 38 39 503 504 505 506 507
500 RET_CODEC_FROM_MIC1_LOWER RET_CODEC_FROM_MIC1_LOWER 79
500 GND GND 38 39 503 504 505 506 507

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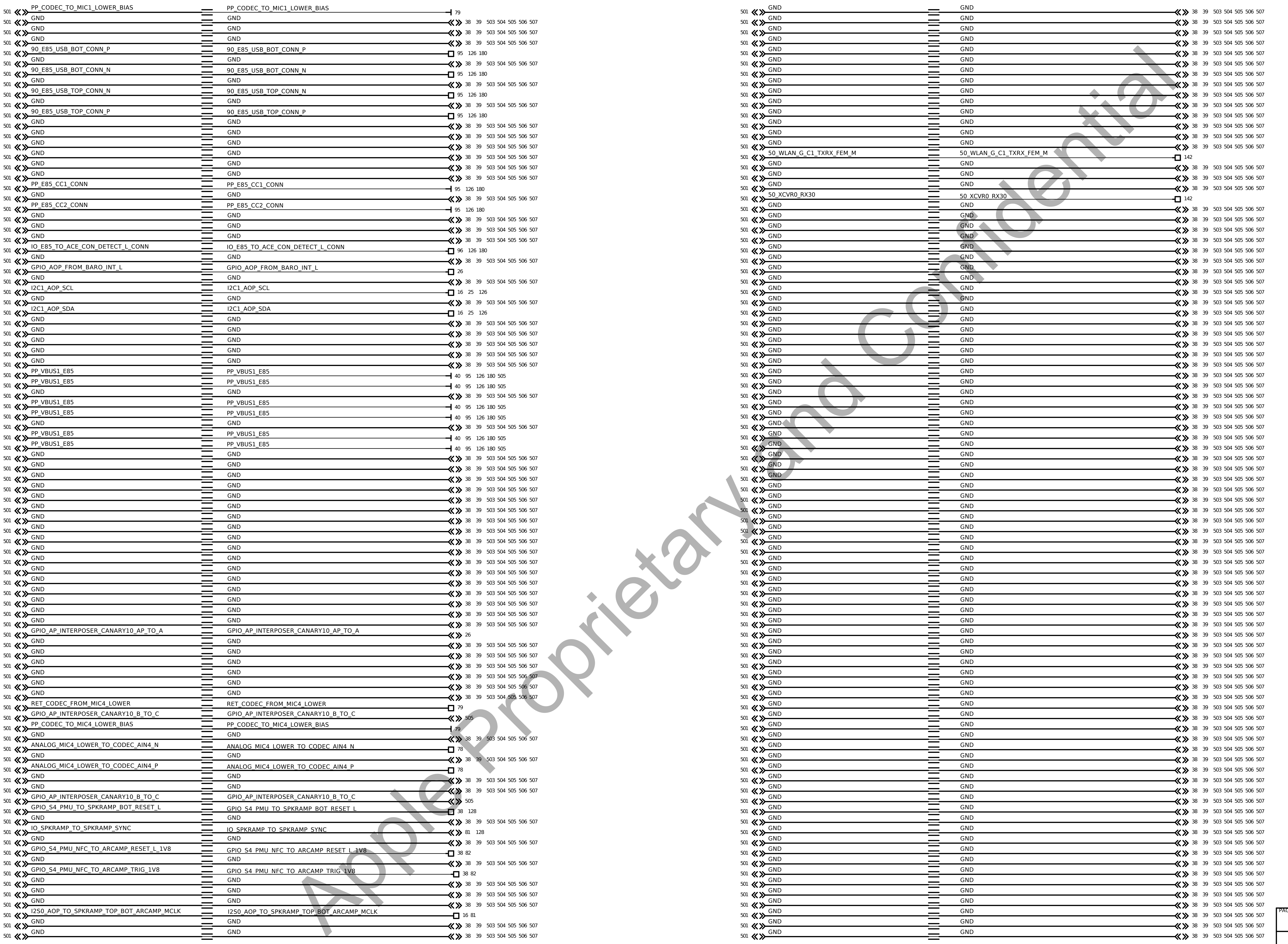
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GND
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GND
GND
PP_E85_CC1_CONN
GND
PP_E85_CC2_CONN
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GND
GND
IO_E85_TO_ACE_CON_DETECT_L_CONN
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I2C1_AOP_SCL
GND
I2C1_AOP_SDA
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PP_VBUS1_E85
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GND
GPIO_AP_INTERPOSER_CANARY10_AP_TO_A
GND
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GND
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GND
RET_CODEC_FROM_MIC4_LOWER
GPIO_AP_INTERPOSER_CANARY10_B_TO_C
PP_CODEC_TO_MIC4_LOWER_BIAS
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ANALOG_MIC4_LOWER_TO_CODEC_AIN4_N
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ANALOG_MIC4_LOWER_TO_CODEC_AIN4_P
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IO_SPKRAMP_TO_SPKRAMP_SYNC
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GPIO_S4_PMU_NFC_TO_ARCAMP_RESET_L_1V8
GND
GPIO_S4_PMU_NFC_TO_ARCAMP_TRIG_1V8
GND
GND
GND
I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK
GND
GND
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50_XCVR0_RX30
GND
501
38 39 503 504 505 506 507
79
95 126 180
96 126 180
26
16 25 126
40 95 126 180 505
505
78
38 128
81 128
38 82
16 81
142

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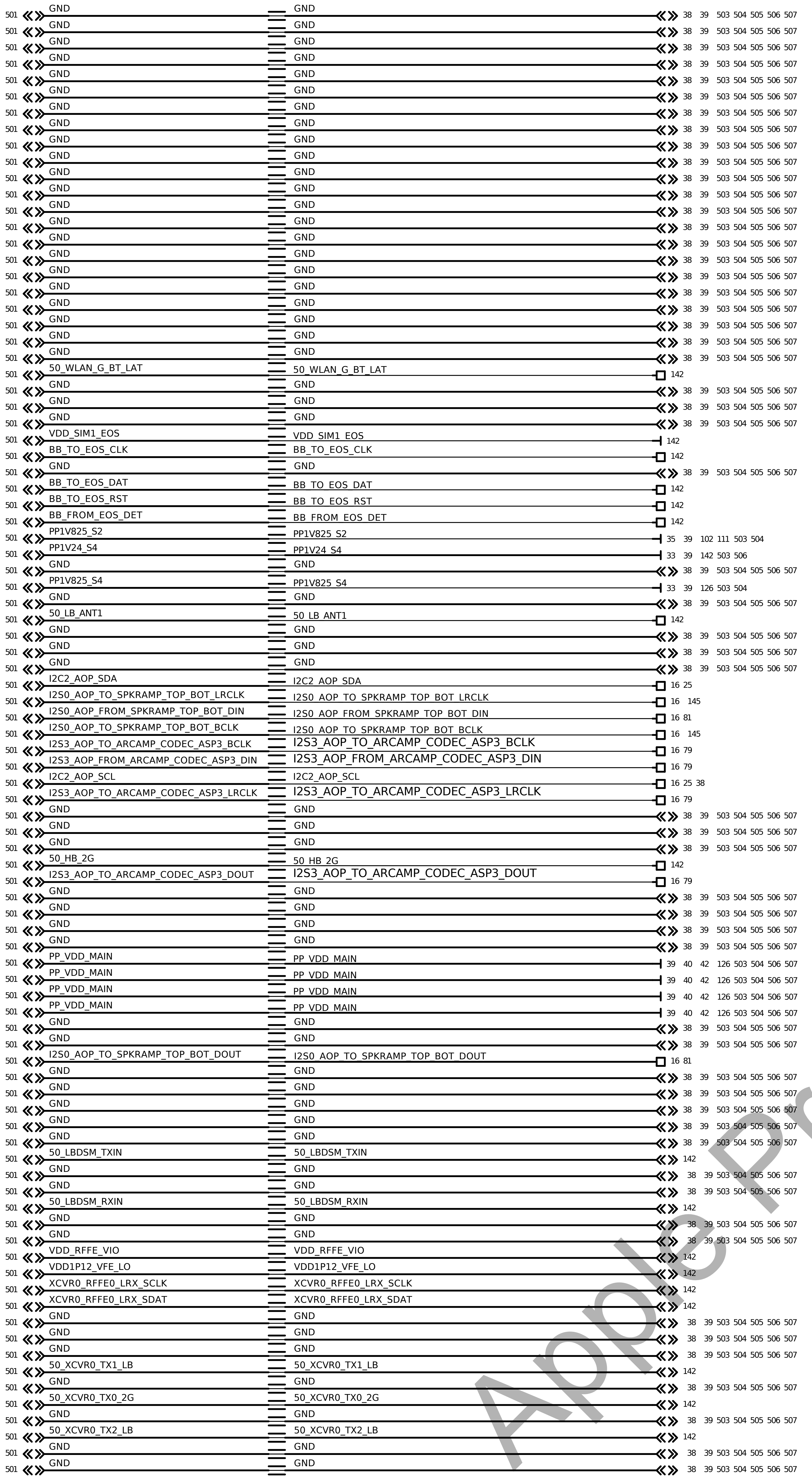
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501 I2S0_AOP_FROM_SPKRAMP_TOP_BOT_DIN I2S0_AOP_FROM_SPKRAMP_TOP_BOT_DIN 16 81
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501 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK 16 79
501 I2S3_AOP_FROM_ARCAMP_CODEC_ASP3_DIN I2S3_AOP_FROM_ARCAMP_CODEC_ASP3_DIN 16 79
501 I2C2_AOP_SCL I2C2_AOP_SCL 16 25 38
501 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_LRCLK I2S3_AOP_TO_ARCAMP_CODEC_ASP3_LRCLK 16 79
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501 GND GND 38 39 503 504 505 506 507
501 50_HB_2G 50_HB_2G 142
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501 GND GND 38 39 503 504 505 506 507
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501 PP_VDD_MAIN PP_VDD_MAIN 39 40 42 126 503 504 506 507
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501 VDD1P12_VFE_LO VDD1P12_VFE_LO 142
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501 XCVR0_RFFE0_LRX_SDAT XCVR0_RFFE0_LRX_SDAT 142
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501 50_XCVR0_TX1_LB 50_XCVR0_TX1_LB 142
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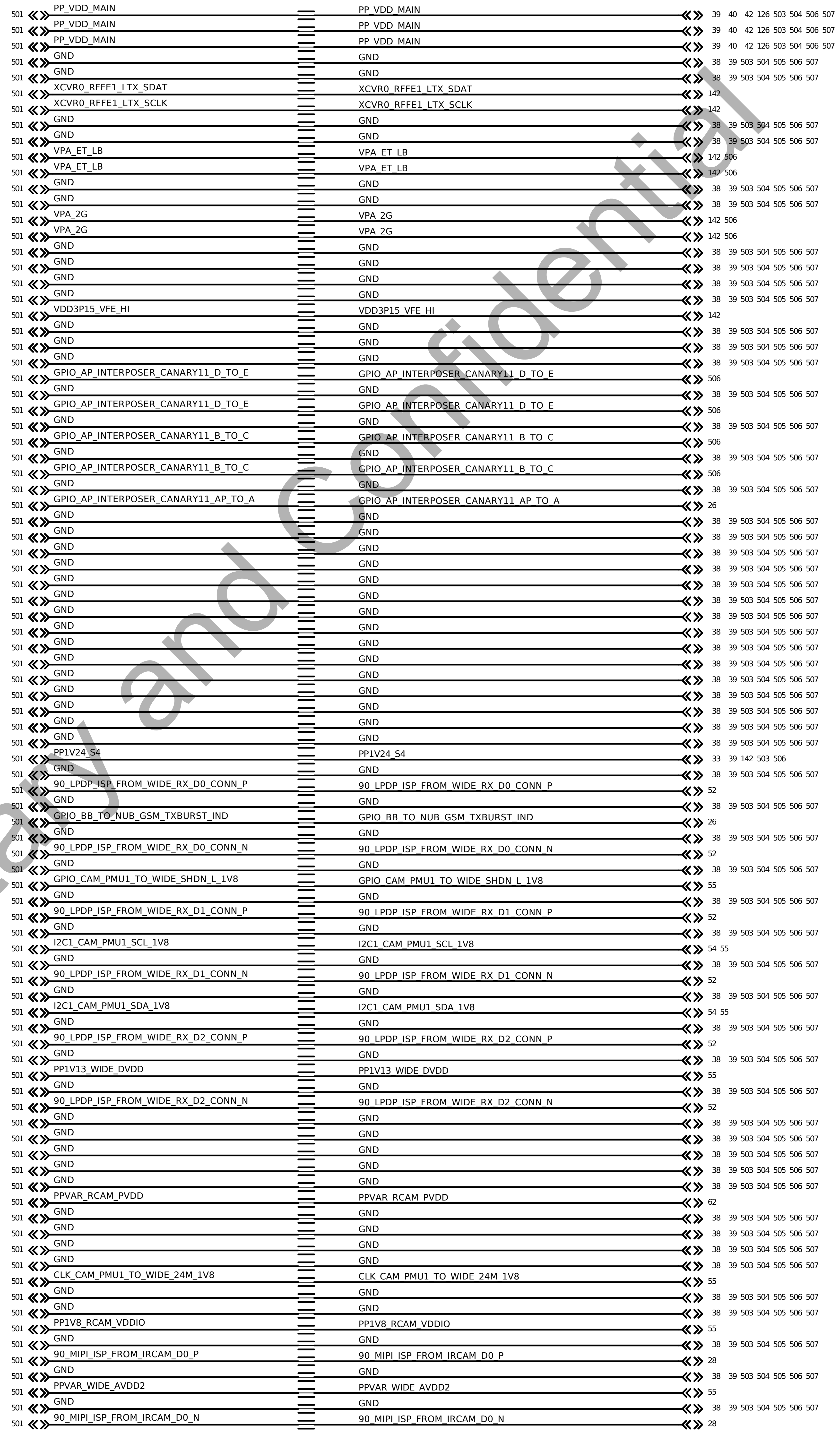
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502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
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502	PP1V2_IRCAM_DVDD	PP1V2_IRCAM_DVDD	55
502	GND	GND	38 39 503 504 505 506 507
502	90_MIPI_ISP_FROM_IRCAM_D1_N	90_MIPI_ISP_FROM_IRCAM_D1_N	28
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8	CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8	55 70
502	GND	GND	38 39 503 504 505 506 507
502	PP2V79_IRCAM_AVDD_GUAD_VDD	PP2V79_IRCAM_AVDD_GUAD_VDD	55
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	PP_VDD_MAIN	PP_VDD_MAIN	39 40 42 126 503 504 506 507
502	GND	GND	38 39 503 504 505 506 507
502	IO_REGULUS_BI_GUAD_STATUS_1V8	IO_REGULUS_BI_GUAD_STATUS_1V8	70
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	IO_IRCAM_TO_REGULUS_STROBE_1V8	IO_IRCAM_TO_REGULUS_STROBE_1V8	70
502	GND	GND	38 39 503 504 505 506 507
502	PP_BANFF_A_ANODE	PP_BANFF_A_ANODE	70
502	GND	GND	38 39 503 504 505 506 507
502	PP1V825_CAM_PMU1_IO_SW	PP1V825_CAM_PMU1_IO_SW	53 55 145 507
502	GND	GND	38 39 503 504 505 506 507
502	PP_BANFF_FLOOD_ANODE	PP_BANFF_FLOOD_ANODE	70
502	GND	GND	38 39 503 504 505 506 507
502	I2C4_CAM_PMU1_SDA_1V8	I2C4_CAM_PMU1_SDA_1V8	54 55
502	GND	GND	38 39 503 504 505 506 507
502	PP_BANFF_B_ANODE	PP_BANFF_B_ANODE	70
502	GND	GND	38 39 503 504 505 506 507
502	I2C4_CAM_PMU1_SCL_1V8	I2C4_CAM_PMU1_SCL_1V8	54 55
502	GND	GND	38 39 503 504 505 506 507
502	PP_BANFF_DOT_ANODE	PP_BANFF_DOT_ANODE	507 70 507
502	GND	GND	38 39 503 504 505 506 507
502	GPIO_NUB_FROM_BANFF_B2B_DETECT_L	GPIO_NUB_FROM_BANFF_B2B_DETECT_L	26 27
502	GND	GND	38 39 503 504 505 506 507
502	GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8	GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8	55
502	CLK_BBPMU_TO_NFC_P_38M4	CLK_BBPMU_TO_NFC_P_38M4	142
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	IO_SLM_BUTTON_SIDE_L_1V8_CONN	IO_SLM_BUTTON_SIDE_L_1V8_CONN	127
502	GND	GND	38 39 503 504 505 506 507
502	PP_VDD_MAIN	PP_VDD_MAIN	39 40 42 126 503 504 506 507
502	GND	GND	38 39 503 504 505 506 507
502	IO_SLM_BUTTON_SIDE_L_1V8	IO_SLM_BUTTON_SIDE_L_1V8	145
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	NFC_P_ANT_NEG	NFC_P_ANT_NEG	142 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	NFC_P_ANT_NEG	NFC_P_ANT_NEG	142 507
502	NFC_P_ANT_NEG	NFC_P_ANT_NEG	142 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	PP2V94_FCAM_AVDD	PP2V94_FCAM_AVDD	55
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8	GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8	55
502	PP1V825_CAM_PMU1_IO_SW	PP1V825_CAM_PMU1_IO_SW	53 55 145 507
502	I2C3_CAM_PMU1_SDA_1V8	I2C3_CAM_PMU1_SDA_1V8	54 55
502	GND	GND	38 39 503 504 505 506 507
502	I2C3_CAM_PMU1_SCL_1V8	I2C3_CAM_PMU1_SCL_1V8	54 55
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GPIO_AP_INTERPOSER_CANARY5_AP_TO_A	GPIO_AP_INTERPOSER_CANARY5_AP_TO_A	26
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507

502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GPIO_AP_INTERPOSER_CANARY5_B_TO_C	GPIO_AP_INTERPOSER_CANARY5_B_TO_C	507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GPIO_AP_INTERPOSER_CANARY5_B_TO_C	GPIO_AP_INTERPOSER_CANARY5_B_TO_C	507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GPIO_AP_INTERPOSER_CANARY5_D_TO_E	GPIO_AP_INTERPOSER_CANARY5_D_TO_E	507
502	GND	GND	38 39 503 504 505 506 507
502	GND	GND	38 39 503 504 505 506 507
502	GPIO_AP_INTERPOSER_CANARY5_D_TO_E	GPIO_AP_INTERPOSER_CANARY5_D_TO_E	507

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REV	ECN	DESCRIPTION OF REVISION	CK APPD DATE
5			2024-09-17

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Primary Chip

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
338S01082	RFSKU:US	NFC_P	CRITICAL	1	IC,EOS,SN300V3,B21,PROD,BS1,WN0,WLCSP79
338S01081	RFSKU:RS||RFSKU:ROW||RFSKU:CHN	NFC_P	CRITICAL	1	IC,EOS,SN300V3,B21,PROD,NBS,WZ0,WLCSP79

RTM7C.5 PRIMARY MATCHING

PRIMARY CS:

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
131S00569	RTM7C.5	C7514_S,C7542_S	CRITICAL	2	CAP,C0G,680PF,2%,50V,0201
131S00017	RTM7C.5	C7543_S,C7555_S	CRITICAL	2	CAP,CER,NP0/C0G,47PF,+/-2%,50V,0201
131S00017	RTM7C.5	C7515_S,C7541_S	CRITICAL	2	CAP,CER,NP0/C0G,47PF,+/-2%,50V,0201

PRIMARY CP:

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
131S00547	RTM7C.5	C7546_S	CRITICAL	1	CAP,C0G,1000PF,2%,50V,0201
131S00017	RTM7C.5	C7547_S	CRITICAL	1	CAP,CER,NP0/C0G,47PF,+/-2%,50V,0201
131S00017	RTM7C.5	C7548_S	CRITICAL	1	CAP,CER,NP0/C0G,47PF,+/-2%,50V,0201
131S00017	RTM7C.5	C7558_S	CRITICAL	1	CAP,CER,NP0/C0G,47PF,+/-2%,50V,0201
131S0883	NOSTUFF	C7559_S	CRITICAL	1	CAP,CER,NP0/C0G,220PF,2%,50V,0201
131S00117	NOSTUFF	C7560_S	CRITICAL	1	CAP,CER,NP0/C0G,120PF,+/-2%,50V,0201

PRIMARY EMC:

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
131S00547	RTM7C.5	C7513_S,C7554_S	CRITICAL	2	CAP,C0G,1000PF,2%,50V,0201
131S00550	RTM7C.5	C7550_S,C7551_S	CRITICAL	2	CAP,C0G,470PF,2%,50V,0201
152S01530	RTM7C.5	L7500_S,L7501_S	CRITICAL	2	IND,MULT,75NH,4%,1.05A,156 MOHM,0402
131S00478	RTM7C.5	C7561_S,C7562_S	CRITICAL	2	CAP,C0G,82PF,2%,25V,01005
131S00019	RTM7C.5	C7552_S,C7553_S	CRITICAL	2	CAP,CER,NP0/C0G,150PF,+/-2%,50V,0201

ALTERNATE PARTS

ALTERNATE PART NO.	PRIMARY PART NO.	BOMOPTION	REFERENCE DESIGNATORS	COMMENT
152S01697	152S00622	ALL	L7502_S	FERR BD,10 OHM,50%,1A,0.05 OHM DCR,0201
155S01010	155S00161	ALL	FL7500_S	IND,MLD,1UH,2.1A,TAIYO
338S01083	338S01082	RFSKU:US	NFC_P	IC,EOS,SN300V3,B21,PROD,BS2,BU0,WLCSP79

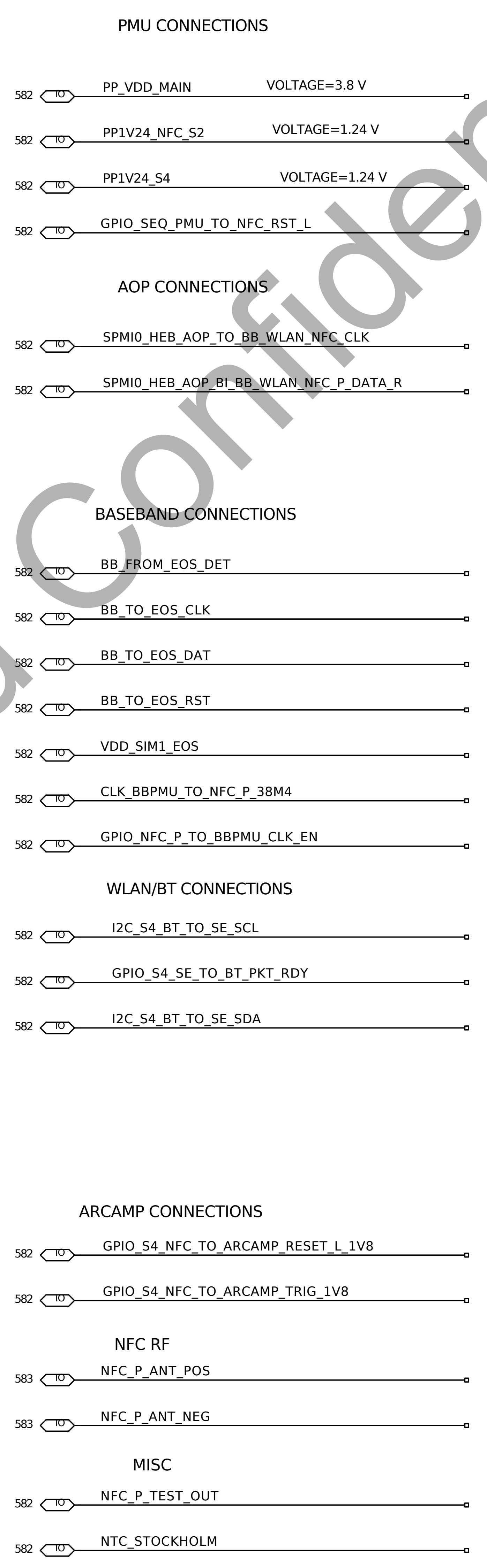
ESIM/PSIM:

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
117S00067	RFSKU:CHN	C7504_S	CRITICAL	1	RES,TK,0 OHM,1/32W,01005
132S00014	RFSKU:US||RFSKU:RS||RFSKU:ROW	C7504_S	CRITICAL	1	CAP,CER,X5R,0.22UF,10%,6.3V,01005

GPIO

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
118S00310	RTM7C.5	R7521_S	CRITICAL	1	RES,TK,60.4K OHM,1%,1/32W,01005

NFC PRIMARY IO PORTS


PMU CONNECTIONS
582 IO PP_VDD_MAIN VOLTAGE=3.8 V
582 IO PP1V24_NFC_S2 VOLTAGE=1.24 V
582 IO PP1V24_S4 VOLTAGE=1.24 V
582 IO GPIO_SEQ_PMU_TO_NFC_RST_L
AOP CONNECTIONS
582 IO SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
582 IO SPMI0_HEB_AOP_BI_BB_WLAN_NFC_P_DATA_R
BASEBAND CONNECTIONS
582 IO BB_FROM_EOS_DET
582 IO BB_TO_EOS_CLK
582 IO BB_TO_EOS_DAT
582 IO BB_TO_EOS_RST
582 IO VDD_SIM1_EOS
582 IO CLK_BBPMU_TO_NFC_P_38M4
582 IO GPIO_NFC_P_TO_BBPMU_CLK_EN
WLAN/BT CONNECTIONS
582 IO I2C_S4_BT_TO_SE_SCL
582 IO GPIO_S4_SE_TO_BT_PKT_RDY
582 IO I2C_S4_BT_TO_SE_SDA
ARCAMP CONNECTIONS
582 IO GPIO_S4_NFC_TO_ARCAMP_RESET_L_1V8
582 IO GPIO_S4_NFC_TO_ARCAMP_TRIG_1V8
NFC RF
583 IO NFC_P_ANT_POS
583 IO NFC_P_ANT_NEG
MISC
582 IO NFC_P_TEST_OUT
582 IO NTC_STOCKHOLM

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PRIMARY NFC CONTROLLER

NFC_P
SN300VUK/B11Y50
WLCSP
PART_NUMBER=338S00877
BOMOPTION=OMIT_TABLE
VDD_SIM1_EOS
VOLTAGE=1.2 V
C7504_S 0.22UF 10% 6.3V CER-X5R 1005 ROOM=NFC BOMOPTION=OMIT_TABLE
PP1V24_NFC_S2
C7535_S 0.22UF 10% 6.3V CER-X5R 1005 ROOM=NFC
PP_NFC_P_VDDNV
C7537_S 0.22UF 10% 6.3V CER-X5R 1005 ROOM=NFC
PP_NFC_P_TVDD
PP_NFC_P_VDDPLL
PP_NFC_P_VDDRF
PP1V24_S4
PP_NFC_P_VDDC
PP_NFC_P_VDDIO_AO
PP_NFC_P_AVDD
C7502_S 2.2UF 20% 6.3V X5R-CERM 201 ROOM=NFC
C7540_S 0.22UF
C7538_S 0.22UF
C7527_S 0.22UF
C7522_S 0.22UF
C7509_S 0.22UF
C7536_S 0.22UF
C7530_S 100PF 5% 25V C0G-CERM
C7506_S 2.2UF 20% 10V X5R 201
C7519_S 10UF 20% 10V X5R-CERM 0402-0.1MM
PP_NFC_P_VDDBOOST
PP_NFC_P_SIMVCC
C7505_S 10UF
C7517_S 10UF
PP_NFC_P_VUP
PP_VDD_MAIN
FL7500_S 10OHM-50%-1A-0.05OHM
C7532_S 0.22UF
C7500_S 2.2UF
C7526_S 2.2UF
C7521_S 100PF
PP_NFC_P_SIMVCC
R7510_S 47K 1% 1/32W TK 1005 ROOM=NFC
NTC_STOCKHOLM
R7511_S 60.4K 1% 1/32W TK 01005-1 ROOM=NFC
C7510_S 0.22UF
C7512_S 0.47UF 20% 6.3V X5R 01005-3 ROOM=NFC
PMUVCC SIMVCC VDDBOOST VDDA VDDAO VDDC VDDCIN_IO_SE VDDIO VDDIO_AO VDDIO_ISO VDDNV VDDPA VDDPLL VDDRF VUP VBAT VBATPWR VBATLIN
AIO1 AIO2 AIO3 NFC_CLK_XTAL1 NFC_GPIO0 NFC_GPIO1 NFC_GPIO2_AO NFC_GPIO3_AO NFC_GPIO4_AO NFC_GPIO5 NFC_GPIO6 NFC_I3C_SCL NFC_I3C_SDA NFC_SIM_SWIO1 NFC_SIM_SWIO2 NFC_SPMI_SCLK NFC_SPMI_SDATA NFC_XTAL2 RXP RXN TM
CLK_BBPMU_TO_NFC_P_38M4
NFC_P_TEST_OUT
NFC_P_GPIO1
GPIO_S4_NFC_TO_ARCAMP_RESET_L_1V8
GPIO_S4_NFC_TO_ARCAMP_TRIG_1V8
NFC_P_TO_BBPMU_CLKEN_1V8
GPIO_NFC_P_TO_BBPMU_CLK_EN
R7520_S 24.9K 1% 1/32W TK
R7521_S 49.9K 1% 1/32W TK 1005 NFC BOMOPTION=OMIT_TABLE
SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
SPMI0_HEB_AOP_BI_BB_WLAN_NFC_P_DATA_R
NFC_P_RXP
NFC_P_RXN
SE_GPIO0 SE_GPIO1 SE_GPXO SE_GPXI SE_I2C_SCL SE_I2C_SDA SE_I3C_SCL SE_I3C_SDA SE_ISO_CLK SE_ISO_IO SE_ISO_RST SE_SPI_CLK SE_SPI_CS SE_SPI_MISO SE_SPI_MOSI SE_SPMI_SCLK SE_SPMI_SDATA RXVMID TXVMID TX1 TX2 BOOST_LX RST* VREF
PULLUP AT BB SIDE
BB_FROM_EOS_DET
GPIO_S4_SE_TO_BT_PKT_RDY
I2C_S4_BT_TO_SE_SCL
I2C_S4_BT_TO_SE_SDA
BB_TO_EOS_CLK
BB_TO_EOS_DAT
BB_TO_EOS_RST
NFC_P_RXVCM
NFC_P_TXVCM
NFC_P_TXP
NFC_P_TXN
C7539_S 0.22UF 20% 10V CERM-X5R 0201-1 ROOM=NFC
C7525_S 0.1UF 10% 6.3V CER-X5R 1005 ROOM=NFC
L7502_S 1UH-20%-2.1A-0.1OHM PIWA2012FE-SM
PP_NFC_P_BOOST_LX
PP_VDD_MAIN
C7511_S 15UF 20% 6.3V X5R 0402-0.1MM-1 ROOM=NFC
GPIO_SEQ_PMU_TO_NFC_RST_L
PP_NFC_P_VREF
C7534_S 0.1UF 10% 6.3V CER-X5R 1005 ROOM=NFC
VSS_DIG VSS_A VSS_PA VSS_RFPLL VSS_PMU VSS_PWR VSS_SUB
PP1V24_S4
R7500_S 2.2K 1% 1/32W TK 1005 ROOM=NFC
R7501_S 2.2K 1% 1/32W TK 1005 ROOM=NFC
PP7529_S P2MM-NSM CRITICAL=CRITICAL ROOM=NFC PLACE_SIDE=TOP PP_NFC_P_VUP
PP7530_S P2MM-NSM PP1V24_NFC_S2
PP7533_S P2MM-NSM PP_NFC_P_VDDNV
PP7501_S GPIO_SEQ_PMU_TO_NFC_RST_L
PP7504_S NTC_STOCKHOLM
PP7505_S NFC_P_GPIO1
PP7500_S CLK_BBPMU_TO_NFC_P_38M4
PP7523_S BB_TO_EOS_CLK
PP7522_S NFC_P_TXP
PP7502_S SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
PP7509_S GPIO_S4_NFC_TO_ARCAMP_TRIG_1V8
PP7507_S PP_NFC_P_VDDIO_AO
PP7510_S PP_NFC_P_SIMVCC
PP7524_S BB_TO_EOS_DAT
PP7526_S NFC_P_TXN
PP7503_S SPMI0_HEB_AOP_BI_BB_WLAN_NFC_P_DATA_R
PP7506_S GPIO_S4_NFC_TO_ARCAMP_RESET_L_1V8
PP7508_S PP_NFC_P_VDDC
PP7521_S GPIO_S4_SE_TO_BT_PKT_RDY
PP7525_S BB_TO_EOS_RST
PP7527_S VDD_SIM1_EOS

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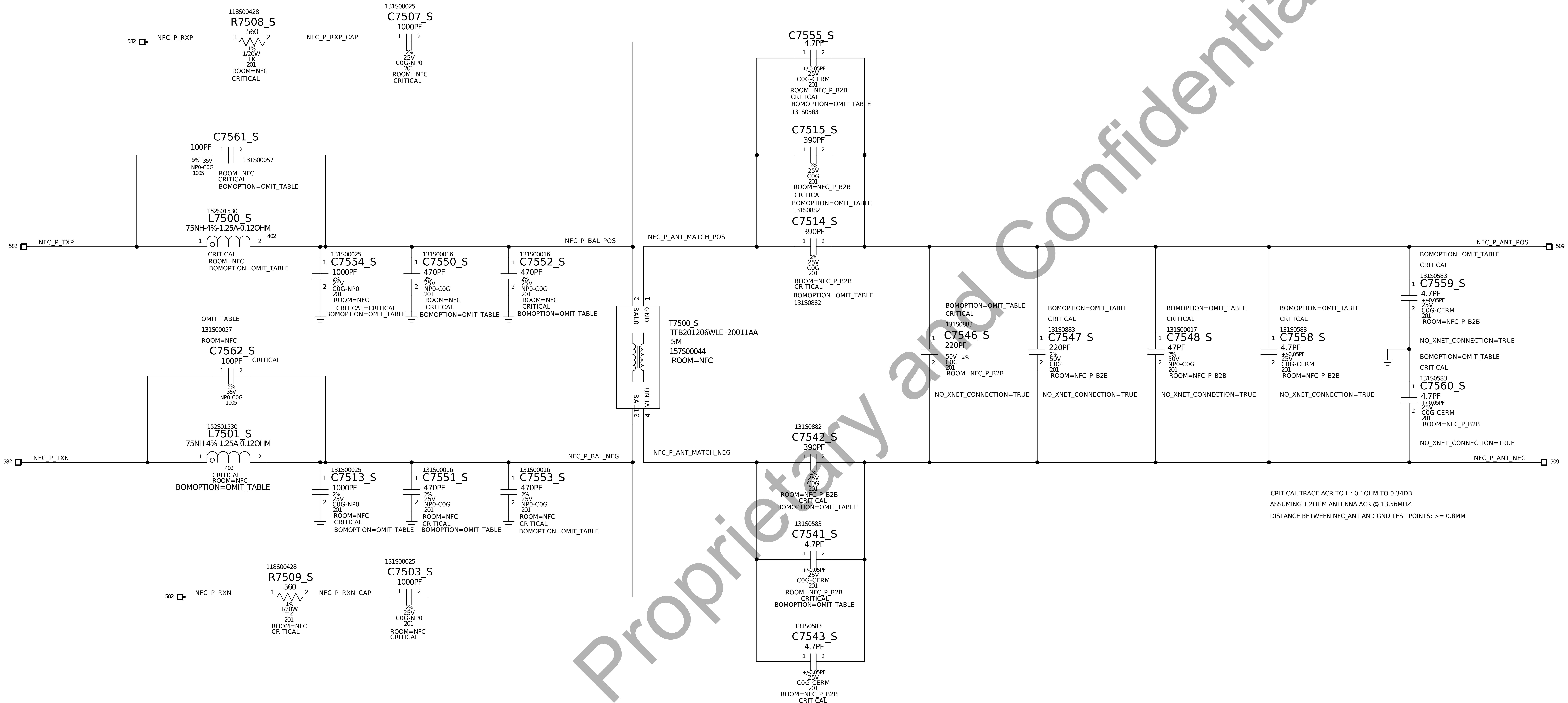
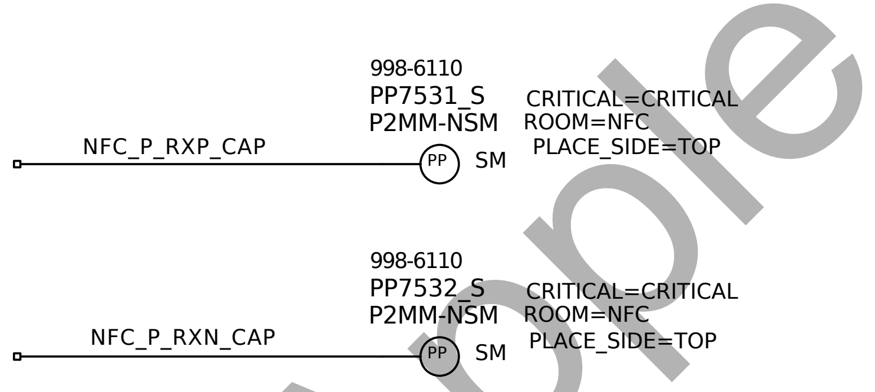
PRIMARY NFC FRONT END



582 NFC_P_RXP
118S00428 R7508_S 560 1% 1/20W TK 201 ROOM=NFC CRITICAL
NFC_P_RXP_CAP
131S00025 C7507_S 1000PF 2% 25V C0G-NP0 201 ROOM=NFC CRITICAL
C7561_S 100PF 5% 35V NP0-C0G 1005 131S00057 ROOM=NFC CRITICAL BOMOPTION=OMIT_TABLE
152S01530 L7500_S 75NH-4%-1.25A-0.12OHM 402 CRITICAL ROOM=NFC BOMOPTION=OMIT_TABLE
582 NFC_P_TXP
NFC_P_BAL_POS
131S00025 C7554_S 1000PF 2% 25V C0G-NP0 201 ROOM=NFC CRITICAL=CRITICAL BOMOPTION=OMIT_TABLE
131S00016 C7550_S 470PF 2% 25V NP0-C0G 201 ROOM=NFC CRITICAL BOMOPTION=OMIT_TABLE
131S00016 C7552_S 470PF 2% 25V NP0-C0G 201 ROOM=NFC CRITICAL BOMOPTION=OMIT_TABLE
OMIT_TABLE 131S00057 ROOM=NFC C7562_S 100PF CRITICAL 5% 35V NP0-C0G 1005
152S01530 L7501_S 75NH-4%-1.25A-0.12OHM 402 CRITICAL ROOM=NFC BOMOPTION=OMIT_TABLE
582 NFC_P_TXN
NFC_P_BAL_NEG
131S00025 C7513_S 1000PF 2% 25V C0G-NP0 201 ROOM=NFC CRITICAL BOMOPTION=OMIT_TABLE
131S00016 C7551_S 470PF 2% 25V NP0-C0G 201 ROOM=NFC CRITICAL BOMOPTION=OMIT_TABLE
131S00016 C7553_S 470PF 2% 25V NP0-C0G 201 ROOM=NFC CRITICAL BOMOPTION=OMIT_TABLE
118S00428 R7509_S 560 1% 1/20W TK 201 ROOM=NFC CRITICAL
582 NFC_P_RXN
NFC_P_RXN_CAP
131S00025 C7503_S 1000PF 2% 25V C0G-NP0 201 ROOM=NFC CRITICAL
T7500_S TFB201206WLE-20011AA SM 157S00044 ROOM=NFC
BAL0 GND UNBAL BAL1
NFC_P_ANT_MATCH_POS
NFC_P_ANT_MATCH_NEG
C7555_S 4.7PF +/-0.05PF 25V C0G-CERM 201 ROOM=NFC_P_B2B CRITICAL BOMOPTION=OMIT_TABLE 131S0583
C7515_S 390PF 2% 25V C0G 201 ROOM=NFC_P_B2B CRITICAL BOMOPTION=OMIT_TABLE 131S0882
C7514_S 390PF 2% 25V C0G 201 ROOM=NFC_P_B2B CRITICAL BOMOPTION=OMIT_TABLE 131S0882
131S0882 C7542_S 390PF 2% 25V C0G 201 ROOM=NFC_P_B2B CRITICAL BOMOPTION=OMIT_TABLE
131S0583 C7541_S 4.7PF +/-0.05PF 25V C0G-CERM 201 ROOM=NFC_P_B2B CRITICAL BOMOPTION=OMIT_TABLE
131S0583 C7543_S 4.7PF +/-0.05PF 25V C0G-CERM 201 ROOM=NFC_P_B2B CRITICAL BOMOPTION=OMIT_TABLE
BOMOPTION=OMIT_TABLE CRITICAL 131S0883 C7546_S 220PF 50V 2% C0G 201 ROOM=NFC_P_B2B NO_XNET_CONNECTION=TRUE
BOMOPTION=OMIT_TABLE CRITICAL 131S0883 C7547_S 220PF 2% 50V C0G 201 ROOM=NFC_P_B2B NO_XNET_CONNECTION=TRUE
BOMOPTION=OMIT_TABLE CRITICAL 131S00017 C7548_S 47PF 2% 50V NP0-C0G 201 ROOM=NFC_P_B2B NO_XNET_CONNECTION=TRUE
BOMOPTION=OMIT_TABLE CRITICAL 131S0583 C7558_S 4.7PF +/-0.05PF 25V C0G-CERM 201 ROOM=NFC_P_B2B NO_XNET_CONNECTION=TRUE
BOMOPTION=OMIT_TABLE CRITICAL 131S0583 C7559_S 4.7PF +/-0.05PF 25V C0G-CERM 201 ROOM=NFC_P_B2B NO_XNET_CONNECTION=TRUE
BOMOPTION=OMIT_TABLE CRITICAL 131S0583 C7560_S 4.7PF +/-0.05PF 25V C0G-CERM 201 ROOM=NFC_P_B2B NO_XNET_CONNECTION=TRUE
NFC_P_ANT_POS 509
NFC_P_ANT_NEG 509

CRITICAL TRACE ACR TO IL: 0.1OHM TO 0.34DB
ASSUMING 1.2OHM ANTENNA ACR @ 13.56MHZ
DISTANCE BETWEEN NFC_ANT AND GND TEST POINTS: >= 0.8MM



NFC_P_RXP_CAP
998-6110 PP7531_S P2MM-NSM SM CRITICAL=CRITICAL ROOM=NFC PLACE_SIDE=TOP
NFC_P_RXN_CAP
998-6110 PP7532_S P2MM-NSM SM CRITICAL=CRITICAL ROOM=NFC PLACE_SIDE=TOP

PAGE TITLE
NFC_P_FE (76)

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REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
5			2024-09-17

SHEET	PAGE/CSA	CONTENTS		
1	1	TABLE OF CONTENTS		
2	2	HIER_WIFI_CG BOM TABLE AND IO PORTS		
3	3	2G4 rFEM [LAT]		

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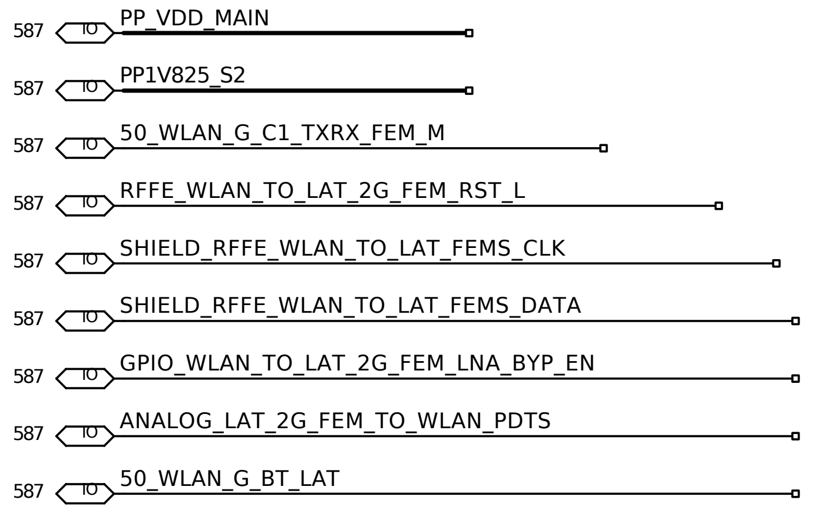
5			2024-09-17

HIER_WIFI_CG


587 IO PP_VDD_MAIN
587 IO PP1V825_S2
587 IO 50_WLAN_G_C1_TXRX_FEM_M
587 IO RFFE_WLAN_TO_LAT_2G_FEM_RST_L
587 IO SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK
587 IO SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA
587 IO GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN
587 IO ANALOG_LAT_2G_FEM_TO_WLAN_PDTS
587 IO 50_WLAN_G_BT_LAT

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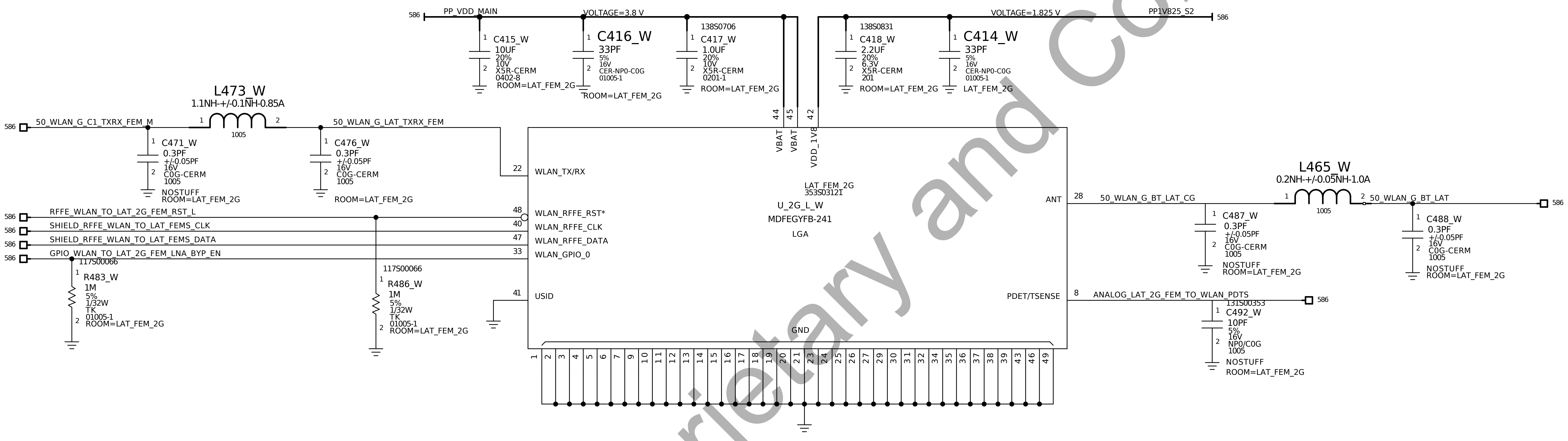
LAT 2.4 GHZ RFEM


586
PP_VDD_MAIN
VOLTAGE=3.8 V
C415_W
10UF
20%
10V
X5R-CERM
0402-8
ROOM=LAT_FEM_2G
C416_W
33PF
5%
16V
CER-NP0-C0G
01005-1
ROOM=LAT_FEM_2G
138S0706
C417_W
1.0UF
20%
10V
X5R-CERM
0201-1
ROOM=LAT_FEM_2G
138S0831
C418_W
2.2UF
20%
6.3V
X5R-CERM
201
ROOM=LAT_FEM_2G
C414_W
33PF
5%
16V
CER-NP0-C0G
01005-1
LAT_FEM_2G
VOLTAGE=1.825 V
PP1V825_S2
586
L473_W
1.1NH-+/-0.1NH-0.85A
1005
586
50_WLAN_G_C1_TXRX_FEM_M
50_WLAN_G_LAT_TXRX_FEM
C471_W
0.3PF
+/-0.05PF
16V
C0G-CERM
1005
NOSTUFF
ROOM=LAT_FEM_2G
C476_W
0.3PF
+/-0.05PF
16V
C0G-CERM
1005
ROOM=LAT_FEM_2G
586 RFFE_WLAN_TO_LAT_2G_FEM_RST_L
586 SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK
586 SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA
586 GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN
117S00066
R483_W
1M
5%
1/32W
TK
01005-1
ROOM=LAT_FEM_2G
117S00066
R486_W
1M
5%
1/32W
TK
01005-1
ROOM=LAT_FEM_2G
22 WLAN_TX/RX
48 WLAN_RFFE_RST*
40 WLAN_RFFE_CLK
47 WLAN_RFFE_DATA
33 WLAN_GPIO_0
41 USID
44 VBAT
45 VBAT
42 VDD_1V8
LAT_FEM_2G
353S03121
U_2G_L_W
MDFEGYFB-241
LGA
GND
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 23 24 25 26 27 29 30 31 32 34 35 36 37 38 39 43 46 49
ANT 28
50_WLAN_G_BT_LAT_CG
L465_W
0.2NH-+/-0.05NH-1.0A
1005
50_WLAN_G_BT_LAT
586
C487_W
0.3PF
+/-0.05PF
16V
C0G-CERM
1005
NOSTUFF
ROOM=LAT_FEM_2G
C488_W
0.3PF
+/-0.05PF
16V
C0G-CERM
1005
NOSTUFF
ROOM=LAT_FEM_2G
PDET/TSENSE 8
ANALOG_LAT_2G_FEM_TO_WLAN_PDTS
586
131S00353
C492_W
10PF
5%
16V
NP0/C0G
1005
NOSTUFF
ROOM=LAT_FEM_2G

PAGE TITLE

2G4 rFEM [LAT] (3)

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REV	ECN	DESCRIPTION OF REVISION	CK APPD DATE
5			2024-09-17

SHEET	PAGE/CSA	CONTENTS		
1	1	TITLE PAGE		
2	2	PORTS		
3	3	CONSTRAINTS		
4	4	FR1 LAT LB/2G SPAD		

DRAWING TITLE

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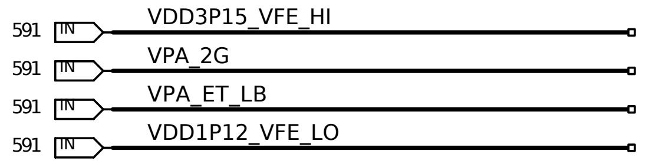
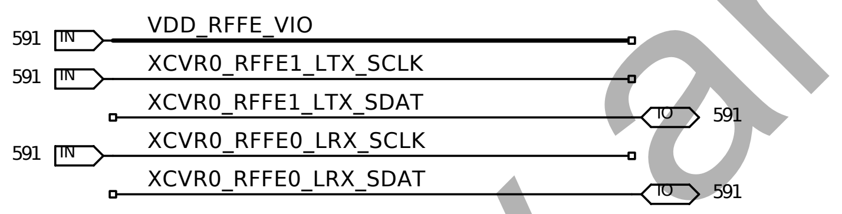
PORTS

CONNECTION FROM/TO MLB_BG

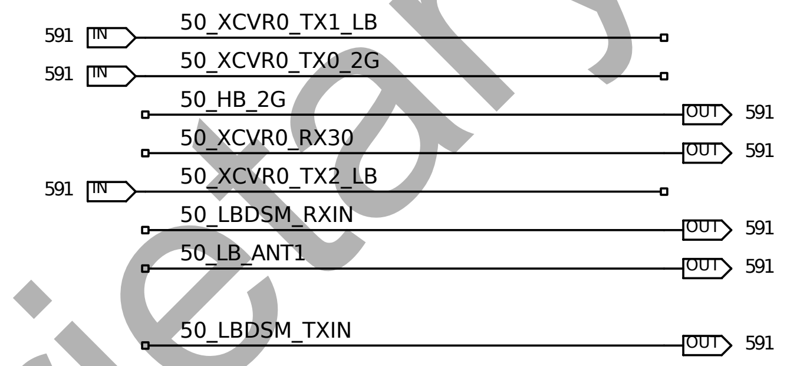
POWER


591 IN VDD3P15_VFE_HI
591 IN VPA_2G
591 IN VPA_ET_LB
591 IN VDD1P12_VFE_LO

RFFE


591 IN VDD_RFFE_VIO
591 IN XCVR0_RFFE1_LTX_SCLK
XCVR0_RFFE1_LTX_SDAT IO 591
591 IN XCVR0_RFFE0_LRX_SCLK
XCVR0_RFFE0_LRX_SDAT IO 591

LB+2G SPAD


591 IN 50_XCVR0_TX1_LB
591 IN 50_XCVR0_TX0_2G
50_HB_2G OUT 591
50_XCVR0_RX30 OUT 591
591 IN 50_XCVR0_TX2_LB
50_LBDSM_RXIN OUT 591
50_LB_ANT1 OUT 591
50_LBDSM_TXIN OUT 591

FR1 LAT MIMO DSM

MOVED BACK TO HIER_RADIO_S_BG

PAGE TITLE
PORTS (2)

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CONSTRAINTS

Grouping Constraints

RF CONSTRAINTS

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
50_THIN_SE	P	A_50_THIN_SE	50_HB*	?
50_THIN_SE	P	A_50_THIN_SE	50_LB_*	?
50_WIDE_SE	P	A_50_WIDE_SE	50_LBDSM_TXIN	?
50_THIN_SE	P	A_50_THIN_SE	50_LMIMO*	?

POWER CONSTRAINTS

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
PWR_SHAPE	P	PWR_SHAPE	VPA_ET*, VPA_2G*	?
PWR_300UM	P	PWR_300UM	VDD3P15_VFE_HI	?
PWR_300UM	P	PWR_300UM	VDD1P12_VFE_LO	?
PWR_300UM	P	PWR_300UM	VDD_*LNA	?
PWR_150UM	P	PWR_150UM	VDD_RFFE_VIO*	?

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
50_LMB_HB_RX	P	A_50_THIN_SE	50_XCVR0_RX30	?
50_2G_LB_SPAD_TX	P	A_50_THIN_SE	50_XCVR0_TX1_LB,50_XCVR0_TX2_LB,50_XCVR0_TX0_2G	?

SENSITIVE TRACE SHEILD

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
RFFE_SHIELD	S	A_DIELECTRIC_1.5X	XCVR0_RFFE*	?

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
50_WIDE_SE	GND	A_DIELECTRIC_1.6X_50_WIDE_SE
50_THIN_SE	GND	A_DIELECTRIC_2X_50_THIN_SE
50_LMB_HB_RX	GND	A_DIELECTRIC_2X_50_THIN_SE
50_2G_LB_SPAD_TX	GND	A_DIELECTRIC_2X_50_THIN_SE

SPACING (SCSET)

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
50_WIDE_SE	S	A_DIELECTRIC_2X_50_WIDE_SE	=	?
50_THIN_SE	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_LMB_HB_RX	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_2G_LB_SPAD_TX	S	A_DIELECTRIC_2X_50_THIN_SE	=	?

PAGE TITLE
CONSTRAINTS

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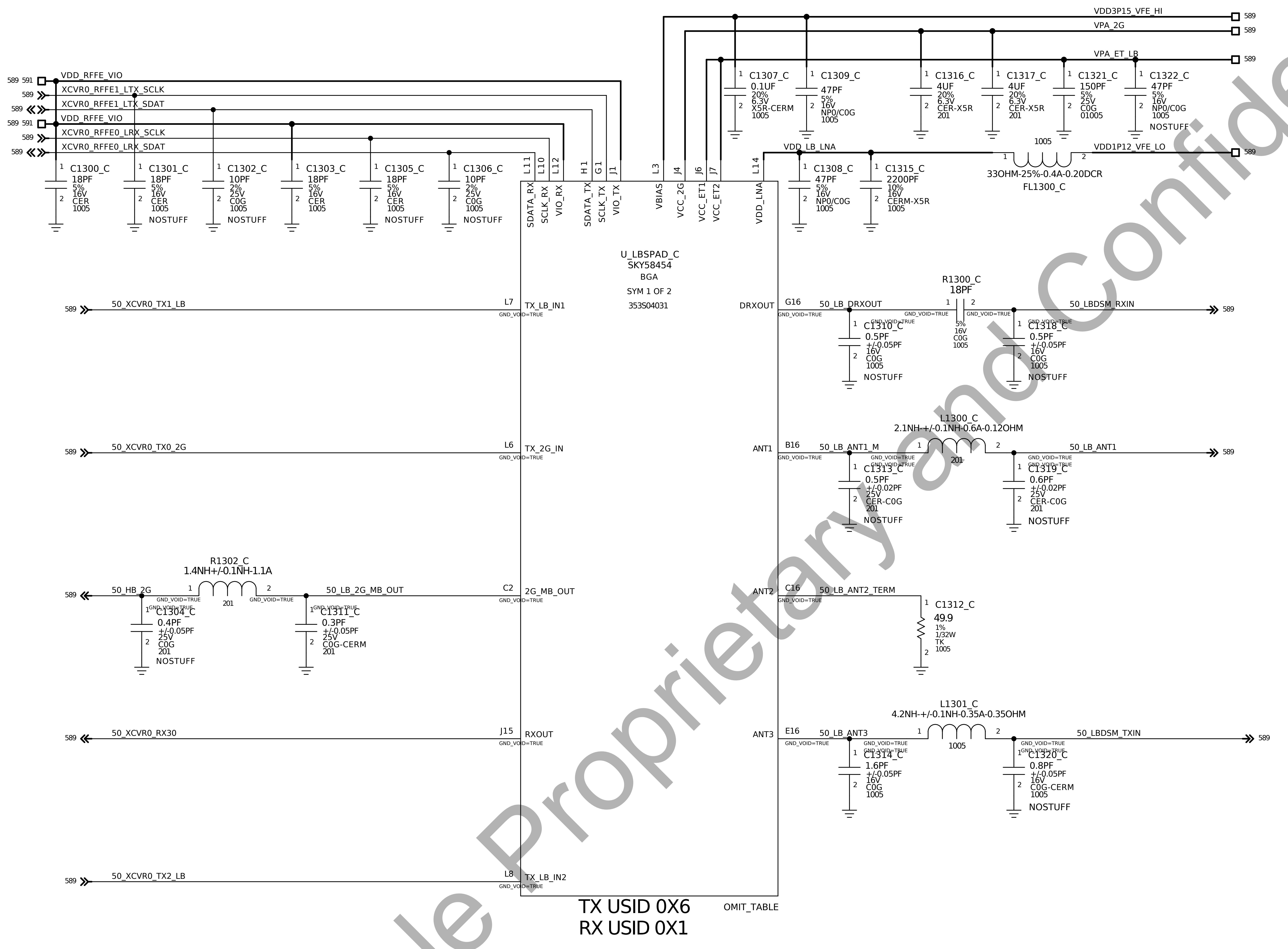
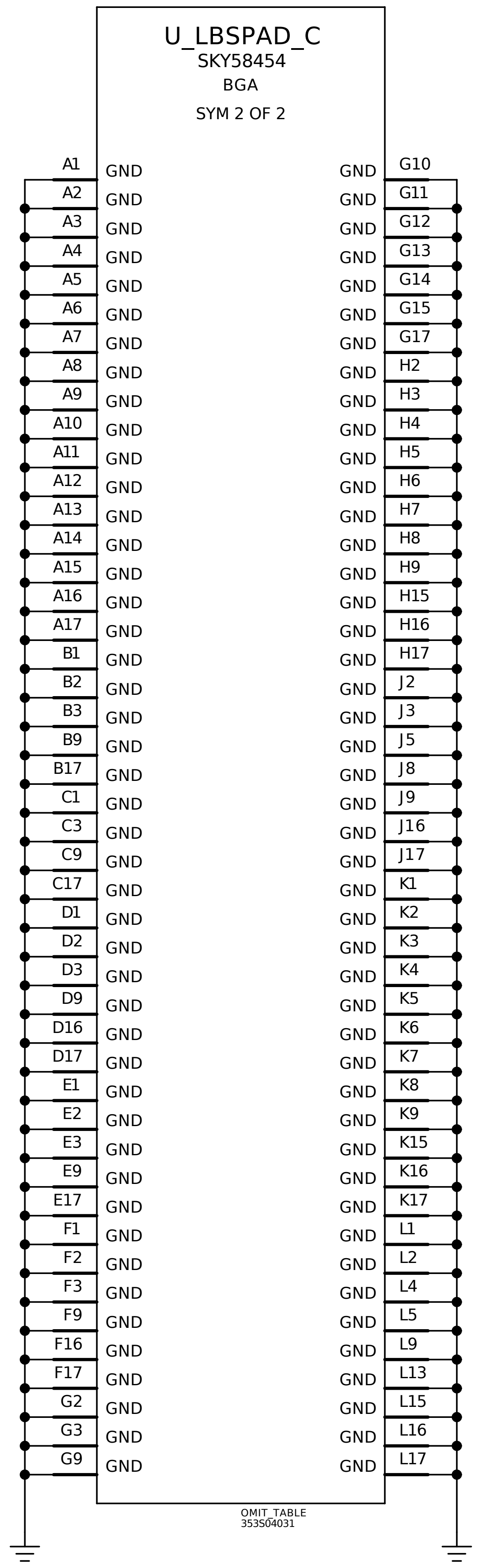
LB+2G SPAD


589 591 VDD_RFFE_VIO
589 XCVR0_RFFE1_LTX_SCLK
589 XCVR0_RFFE1_LTX_SDAT
589 591 VDD_RFFE_VIO
589 XCVR0_RFFE0_LRX_SCLK
589 XCVR0_RFFE0_LRX_SDAT
C1300_C 18PF 5% 16V CER 1005
C1301_C 18PF 5% 16V CER 1005 NOSTUFF
C1302_C 10PF 2% 25V C0G 1005 NOSTUFF
C1303_C 18PF 5% 16V CER 1005
C1305_C 18PF 5% 16V CER 1005 NOSTUFF
C1306_C 10PF 2% 25V C0G 1005 NOSTUFF
L11 SDATA_RX
L10 SCLK_RX
L12 VIO_RX
H1 SDATA_TX
G1 SCLK_TX
J1 VIO_TX
L3 VBIAS
J4 VCC_2G
J6 VCC_ET1
J7 VCC_ET2
L14 VDD_LNA
VDD3P15_VFE_HI 589
VPA_2G 589
VPA_ET_LB 589
C1307_C 0.1UF 20% 6.3V X5R-CERM 1005
C1309_C 47PF 5% 16V NP0/C0G 1005
C1316_C 4UF 20% 6.3V CER-X5R 201
C1317_C 4UF 20% 6.3V CER-X5R 201
C1321_C 150PF 5% 25V C0G 01005
C1322_C 47PF 5% 16V NP0/C0G 1005 NOSTUFF
VDD_LB_LNA
C1308_C 47PF 5% 16V NP0/C0G 1005
C1315_C 2200PF 10% 16V CERM-X5R 1005
1005
33OHM-25%-0.4A-0.20DCR
FL1300_C
VDD1P12_VFE_LO 589
U_LBSPAD_C
SKY58454
BGA
SYM 1 OF 2
353S04031
589 50_XCVR0_TX1_LB
L7 TX_LB_IN1
GND_VOID=TRUE
DRXOUT G16 50_LB_DRXOUT
GND_VOID=TRUE
R1300_C 18PF 5% 16V C0G 1005
50_LBDSM_RXIN 589
C1310_C 0.5PF +/-0.05PF 16V C0G 1005 NOSTUFF
C1318_C 0.5PF +/-0.05PF 16V C0G 1005 NOSTUFF
589 50_XCVR0_TX0_2G
L6 TX_2G_IN
ANT1 B16 50_LB_ANT1_M
L1300_C
2.1NH-+/-0.1NH-0.6A-0.12OHM
201
50_LB_ANT1 589
C1313_C 0.5PF +/-0.02PF 25V CER-C0G 201 NOSTUFF
C1319_C 0.6PF +/-0.02PF 25V CER-C0G 201 NOSTUFF
R1302_C
1.4NH+/-0.1NH-1.1A
201
589 50_HB_2G
50_LB_2G_MB_OUT
C2 2G_MB_OUT
C1304_C 0.4PF +/-0.05PF 25V C0G 201 NOSTUFF
C1311_C 0.3PF +/-0.05PF 25V C0G-CERM 201
ANT2 C16 50_LB_ANT2_TERM
C1312_C 49.9 1% 1/32W TK 1005
589 50_XCVR0_RX30
J15 RXOUT
ANT3 E16 50_LB_ANT3
L1301_C
4.2NH-+/-0.1NH-0.35A-0.35OHM
1005
50_LBDSM_TXIN 589
C1314_C 1.6PF +/-0.05PF 16V C0G 1005
C1320_C 0.8PF +/-0.05PF 16V C0G-CERM 1005 NOSTUFF
589 50_XCVR0_TX2_LB
L8 TX_LB_IN2
TX USID 0X6
RX USID 0X1
OMIT_TABLE


U_LBSPAD_C
SKY58454
BGA
SYM 2 OF 2
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A17 B1 B2 B3 B9 B17 C1 C3 C9 C17 D1 D2 D3 D9 D16 D17 E1 E2 E3 E9 E17 F1 F2 F3 F9 F16 F17 G2 G3 G9
GND
G10 G11 G12 G13 G14 G15 G17 H2 H3 H4 H5 H6 H7 H8 H9 H15 H16 H17 J2 J3 J5 J8 J9 J16 J17 K1 K2 K3 K4 K5 K6 K7 K8 K9 K15 K16 K17 L1 L2 L4 L5 L9 L13 L15 L16 L17
OMIT_TABLE
353S04031

LB S-PAD RF SKU

	PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
WW SKU	353S04031	RFSKU:RS	U_LBSPAD_C	CRITICAL	1	IC,PAD,2G+LB,SKY58454,DSMBGA112
WW SKU	353S04031	RFSKU:US	U_LBSPAD_C	CRITICAL	1	IC,PAD,2G+LB,SKY58454,DSMBGA112
RS SKU	353S04051	RFSKU:CHN	U_LBSPAD_C	CRITICAL	1	IC,PAD, 2G+LB,SKY58455,SKU,DSMBGA112
RS SKU	353S04051	RFSKU:ROW	U_LBSPAD_C	CRITICAL	1	IC,PAD, 2G+LB,SKY58455,SKU,DSMBGA112

PAGE TITLE
FR1 LAT LB/2G SPAD (4)

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DRAWING NUMBER
SIZE

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APPD

MLB

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3	3	SYSTEM: BOM Tables (2/2)		
4	9	SYSTEM: Mechanical		
5	50	SYS PWR: NTCs (Bottom)		
6	51	UF DUMMIES		
7	80	AUDIO: Bot Speaker Amp		
8	83	HAPTIC: Haptic Amp		
9	84	HAPTIC: Sakonnet		
10	104	B2B: Battery		
11	105	B2B: BG Flex		
12	106	B2B: Camera Wide		
13	109	B2B: FCAM		
14	110	B2B: SMP		
15	113	B2B: Dock		
16	114	B2B: SIM + Arc		
17	115	B2B: Button		
18	120	B2B: UAT1		
19	121	B2B: UAT2		
20	123	B2B: LAT		
21	141	SYSTEM: Aliases		
22	327	TESTING: Test Points		
23	329	TESTING: Probe Points		
24	342	HIERARCHIES: BOT: Radio + NFC		
25	343	HIERARCHIES: BOT: WiFi		
26	600	Interposer: BG (1/3)		
27	601	Interposer: BG (2/3)		
28	602	Interposer: BG (3/3)		
29	603	INTERPOSER: Aliases (1/5)		
30	604	INTERPOSER: Aliases (2/5)		
31	605	INTERPOSER: Aliases (3/5)		
32	606	INTERPOSER: Aliases (4/5)		
33	607	INTERPOSER: Aliases (5/5)		
34	1	TOC		
35	2	NFC_IO		
36	75	NFC_P_FE		
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38	2	WLAN SYMBOL IO PORTS		
39	3	BOM Table		
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42	6	5G rFEM (UAT)		
43	7	5G rFEM (LAT)		
44	8	2G4 rFEM (UAT)		
45	9	2G4 rFEM (LAT)		
46	1	TITLE PAGE		
47	2	PORTS		
48	3	BLOCK DIAGRAM		
49	4	BBPMU (1/2)		
50	5	BBPMU (2/2)		
51	6	BASEBAND (1/3)		
52	7	BASEBAND (2/3)		
53	8	BASEBAND (3/3)		
54	9	CLOCKING		
55	10	CARPO		
56	11	CARPO POWER		
57	12	ETIC		
58	13	FR1 LAT LB/2G SPAD		
59	14	FR1 LAT HB SPAD		
60	15	FR1 LAT UHB SPAD		
61	16	FR1 LAT MIMO DSM		
62	17	FR1 LAT COUPLERS		
63	18	FR1 UAT TX DSM		
64	19	FR1 UAT UHB DSM		
65	20	FR1 UAT RX (1/2)		
66	21	FR1 UAT RX (2/2)		
67	22	FR1 UAT COUPLERS		
68	23	FR1 UAT ANTENNAS & GPS		
69	24	FR1 ANTENNA TUNERS		
70	25	TEST POINTS		
71	26	CONSTRAINTS		

DRAWING TITLE
SCH,MLB,BG,

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Multi-Vendor Criticals

Capacitors

In descending order of value, then package size

PART NUMBER	COMMENT
138S0979	CAP,CER,X5R,10UF,20%,10V,0402,H=0.65MM
138S0692	CAP,CER,X5R,1UF,20%,6.3V,0201
138S00014	CAP,CER,X5R,1UF,20%,16V,0201,H=0.39MM
132S0534	CAP,CER,X5R,0.1UF,10%,25V,0201
132S00258	CAP,CER,X7R,330PF,10%,16V,01005
131S0883	CAP,CER,NP0/C0G,220PF,2%,50V,0201
131S00543	CAP,CER,C0G,220PF,5%,25V,01005
131S00057	CAP,CER,NPO/COG,100PF,5%,35V,01005
138S0968	CAP,CER,X5R,4.2UF,10%,16V,0402,H=0.55MM
131S00294	CAP,C0G,330PF,5%,25V,0201
132S00030	CAP,CER,0.1UF,10%,10V,X6S,0201
131S00732	CAP,CER,NP0/C0G,18PF,5%,16V,01005
132S00051	CAP,X7R,330PF,10%,25V,0201
131S00730	CAP,CER,NP0/C0G,100PF,5%,16V,01005

PART NUMBER	COMMENT
131S00731	CAP,CER,NPO/COG,56PF,5%,25V,01005
131S00740	CAP,CER,NPO/COG,47PF,5%,16V,01005
131S00742	CAP,CER,NPO/COG,33PF,5%,16V,01005
131S00291	CAP,CER,NPO/COG,27PF,5%,16V,01005
131S00741	CAP,CER,COG,22PF,5%,16V,01005
131S00333	CAP,CER,COG,10PF,2%,25V,01005
131S00383	CAP,CER,NPO/COG,4.7PF,+/-0.1PF,16V,01005

Ferrites

PART NUMBER	COMMENT
155S0576	FERR BD,10 OHM,50%,750MA,0.07 DCR,01005

2020 MLCCs

16uF, 0402, 4V

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S00484	138S00313	ALL	CAP,X5R,16UF,20%,4V,T,0402
138S00314	138S00313	ALL	CAP,X5R,16UF,20%,4V,M,0402
138S00315	138S00313	ALL	CAP,X5R,16UF,20%,4V,M,0402

Primary: Murata

Taiyo

Kyocera

Samsung

15uF, 0402

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S00048	138S00003	(C8000-C8002,C8004,C8300-C8302,C8304)	0402,15uF,6.3V, Kyocera
138S00406	138S00003		0402,13uF,6.3V, Murata Gen2
138S00388	138S00003		0402,9uF,6.3V, Samco Gen2

Primary: Murata

Kyocera

Murata Gen 2

Samsung Gen 2

://134023334 ([V59] [CRB] DQ 8x 138S00048 locations on BG, add Gen2 cap options as ALT)

13uF, 0402, 6.3V

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S00405	138S00406	ALL	CAP,X5R,13UF,20%,6.3V,4.9UF@3V,K,0402
138S00388	138S00406	ALL	CAP,X5R,9UF,20%,6.3V,4.9@3V,SAM,0402

Primary: Murata

Kyocera

Samsung

7.5uF, 0402, 4V

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S00024	138S0986	ALL	CAP,CER,3-TERM,7.5UF,20%,4V,0402

Primary: Murata

Taiyo

PART NUMBER	COMMENT
138S00313	CAP,CER,X5R,16UF,20%,4V,0402
138S00003	0402,15uF,6.3V
138S00406	CAP,X5R,13UF,20%,6.3V,4.9UF@3V,M,0402
138S0986	CAP,CER,3-TERM,7.5UF,20%,4V,0402

Capacitor Alternates

4uF, 0201

ALTERNATE PART NO.	PRIMARY PART NO.	COMMENT
138S00116	138S00071	CAP,X5R,4UF,0201,0.55MM,TAIYO
138S00117	138S00071	CAP,X5R,4UF,0201,0.55MM,KYOCERA
138S00515	138S00071	CAP,X5R,4UF,0201,0.55MM,SEMCO

PART NUMBER	COMMENT
138S00071	0201,X5R,4UF,0201,0.55MM,MURATA

4.2uF, 0201

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S00518	138S0968	ALL	CAP,CER,X5R,4.2UF,10%,16V,K,0402H0.55,KYOCERA
138S00513	138S0968	ALL	CAP,CER,X5R,4.2UF,10%,16V,S,0402,H0.55,SEMCO

://134475084 ([V59][CRB][BOM] Add more ALTs for 138S00014 and 138S0968 in BOM table)

2.2uF, 0201, 6.3V

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S0831	138S00450	ALL	CAP,CER,X5R,2.2UF,20%,6.3V,0201
138S00516	138S00450	ALL	CAP,X5R,2.2UF,20%,6.3V,S,HZ0201
138S00049	138S00450	ALL	CAP,CER,X5R,2.2UF,20%,6.3V,0201

PART NUMBER	COMMENT
138S00450	CAP,CER,X5R,2.2UF,20%,6.3V,0201

1uF, 0201

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S0739	138S0706	ALL	CAP,CER,X5R,1UF,20%,10V,0201,SAMSUNG
138S0945	138S0706	ALL	CAP,CER,X5R,1UF,20%,10V,0201,KYOCERA
138S00517	138S00014	ALL	CAP,X5R,1UF,20%,16V,0201,H=0.39MM,KYOCERA
138S00085	138S00014	ALL	CAP,X5R,1UF,20%,16V,0201,H=0.39MM,MURATA

PART NUMBER	COMMENT
138S0706	CAP,X5R,1UF,20%,10V,0201

0.47uF, 01005

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S00128	138S00412	ALL	CAP,CER,X5R,0.47UF,20%,6.3V,KYO,01005
138S00519	138S00412		CAP,X5R,0.47UF,20%,6.3V,0.09@3V,S,01005

PART NUMBER	COMMENT
138S00412	CAP,X5R,0.47UF,20%,6.3V,MUR,01005

://134474177 ([V59][CRB][BOM]Taiyo (138S00269) 0.47uF cap DQ)) ://134406786 ([V59][CRB][BOM] Add 138S00519 SEMCO BOM option)

0.22uF, 01005

ALTERNATE PART NO.	PRIMARY PART NO.	COMMENT
132S00380	132S00014	01005,0.22uF,6.3V,Taiyo
132S00304	132S00014	01005,0.22uF,6.3V,Kyocera

PART NUMBER	COMMENT
132S00014	01005,0.22uF, 6.3V

0.1uF, 01005, 6.3V

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
132S00185	132S0316	ALL	CAP,CER,X5R,0.1UF,20%,6.3V,01005
132S00350	132S0316	ALL	CAP,CER,X5R,0.1UF,20%,6.3V,01005

PART NUMBER	COMMENT
132S0316	01005,0.1uF, 6.3V

2200pF, 01005

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
132S00308	132S0420	ALL	CAP,X5R,2200PF,10%,16V,01005,Kyocera
132S00264	132S0420		CAP,CER,X5R,2200PF,10%,16V,01005

PART NUMBER	COMMENT
132S0420	CAP,X5R,2200PF,10%,16V,01005,Taiyo

PAGE TITLE

SYSTEM: BOM Tables (1/2) (2)

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Misc. Alternates

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
155S00437	155S00402	ALL	FERR BD,33OHM,25%,1.5A,55MOHM DCR,0201
155S00414	155S0876	ALL	FERR BD,10OHM,50%,1.1A,0.05OHM DCR,01005
155S00583	155S00140	ALL	FERR BD,33OHM,25%,400MA,0.20DCR,01005
377S00070	377S00001	ALL	TVS,BIDIR,5.8V,6PF,01005
377S00140	377S00001	ALL	TVS,BIDIR,5V,6PF,01005
155S00700	155S00462	ALL	FLTR,-30DB@0.6-1.55GHZ,1-LINE,ESD,LGA3,ONSEMI
155S00706	155S00462	ALL	FLTR,-30DB@0.6-1.55GHZ,1-LINE,ESD,LGA3,INFINEON
107S00469	107S00349	ALL	THERMISTOR,NTC,10K OHM,1%,B=3380K,01005

PART NUMBER	COMMENT
155S00402	FERR BD,33OHM,25%,1.5A,55MOHM DCR,0201
155S0876	FERR BD,10OHM,50%,1.1A,0.05OHM DCR,01005
155S00140	FERR BD,33OHM,25%,400MA,0.20DCR,01005
377S00001	TVS,BIDIR,5.8V,6PF,01005
155S00462	FLTR,-30DB@0.6-1.55GHZ,1-LINE,ESD,LGA3
107S00349	THERMISTOR,NTC,10KO,1%,B=3380,01005,MUR

Power Inductor Alternates

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
152S01513	152S00897	ALL	IND,CPLD,0.1UH,20%,5.5A,20MO,2016
152S01771	152S00818	ALL	Taiyo,IND,MLD,0.22UH,5.3A,40MO,1608
152S00979	152S00874	ALL	Taiyo,IND,MLD,0.47UH,1.7A,175MO,0402

PART NUMBER	COMMENT
152S00897	Taiyo,IND
152S00818	Cyntec,IND
152S00874	Cyntec.IND

PAGE TITLE

SYSTEM: BOM Tables (2/2) (3)

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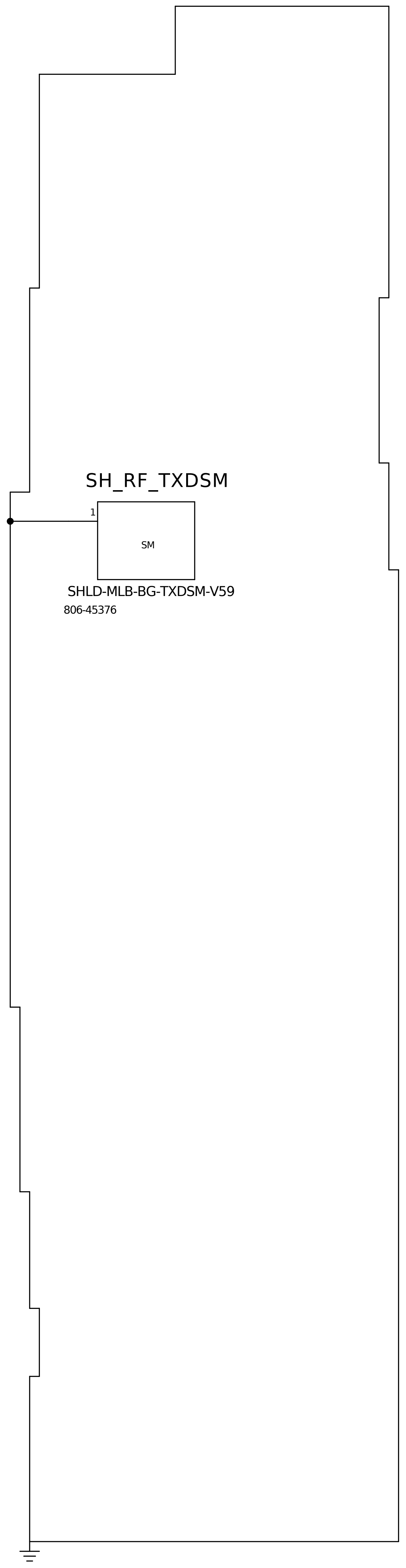
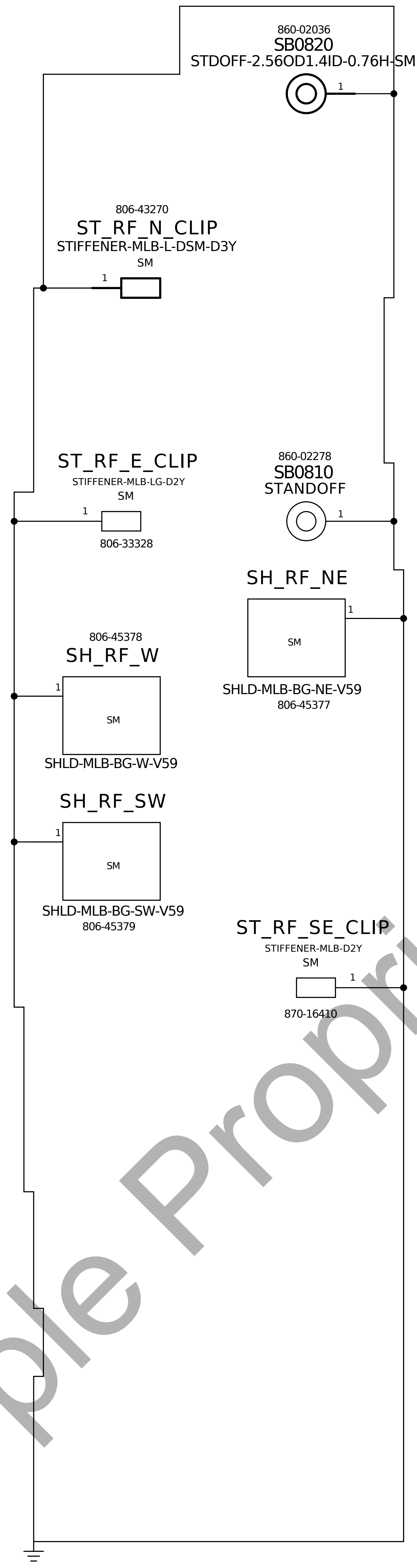
Conventions:

1. All net names and notes should use font size 0.112 (8 if you use the group tool)
2. Nets which are not connected on FFs but probed out on dev board should start with "NC_DEV_"
3. Nets that contain "_1V8" are 1.8V logic, all other nets are implied 1.2V logic
4. Components with PACK_IGNORE=TRUE will not be included in the netlist

TOP SIDE


SH_RF_TXDSM
1
SM
SHLD-MLB-BG-TXDSM-V59
806-45376

BOTTOM SIDE


860-02036
SB0820
STDOFF-2.56OD1.4ID-0.76H-SM
1
806-43270
ST_RF_N_CLIP
STIFFENER-MLB-L-DSM-D3Y
SM
1
ST_RF_E_CLIP
STIFFENER-MLB-LG-D2Y
SM
1
806-33328
860-02278
SB0810
STANDOFF
1
SH_RF_NE
1
SM
SHLD-MLB-BG-NE-V59
806-45377
806-45378
SH_RF_W
1
SM
SHLD-MLB-BG-W-V59
SH_RF_SW
1
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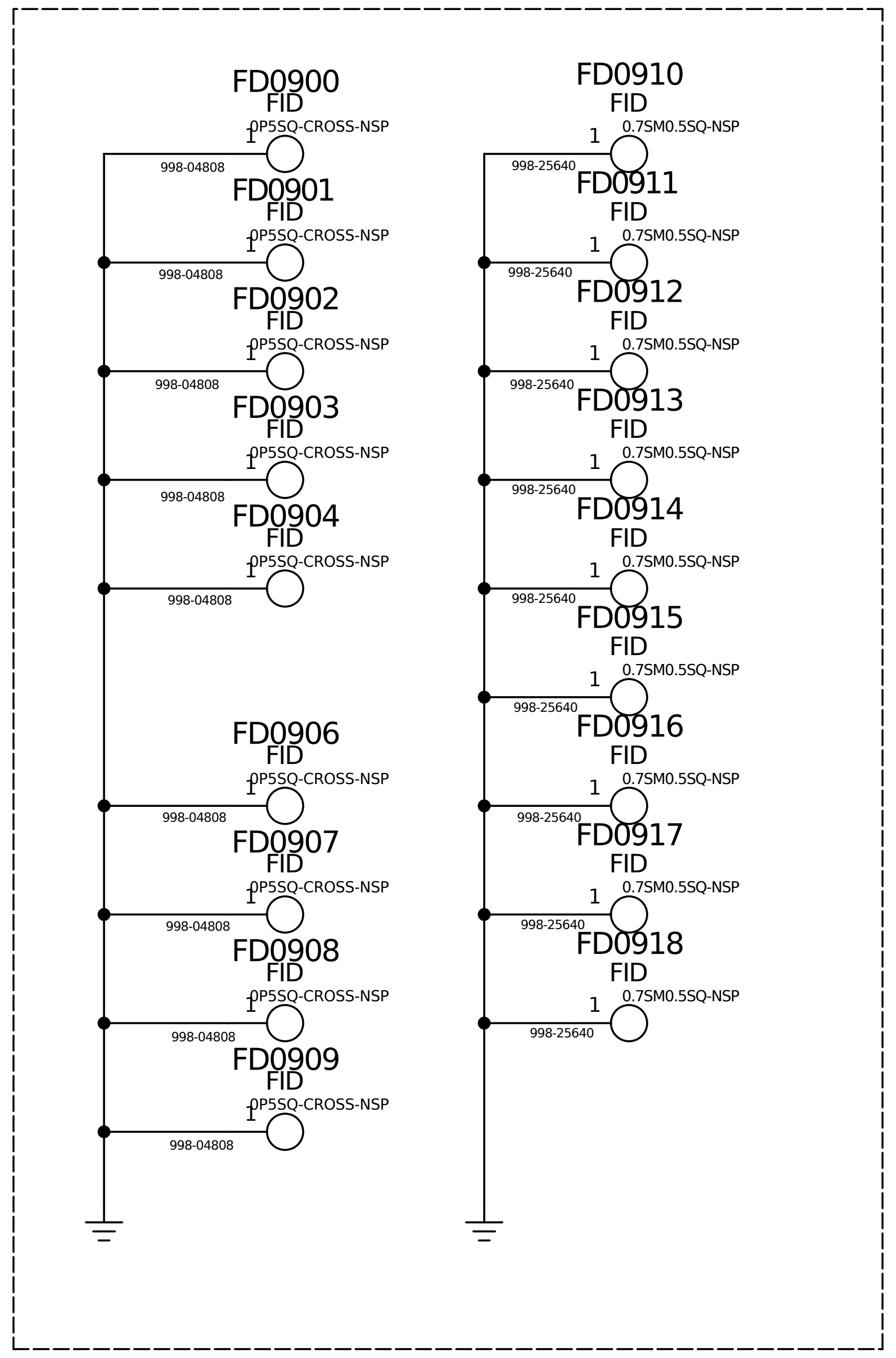
ST_RF_SE_CLIP
STIFFENER-MLB-D2Y
SM
1
870-16410


FD0900
FID
0P5SQ-CROSS-NSP
1
998-04808
FD0901
FID
0P5SQ-CROSS-NSP
1
998-04808
FD0902
FID
0P5SQ-CROSS-NSP
1
998-04808
FD0903
FID
0P5SQ-CROSS-NSP
1
998-04808
FD0904
FID
0P5SQ-CROSS-NSP
1
998-04808
FD0906
FID
0P5SQ-CROSS-NSP
1
998-04808
FD0907
FID
0P5SQ-CROSS-NSP
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0P5SQ-CROSS-NSP
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FD0909
FID
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1
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1
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FD0911
FID
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1
998-25640
FD0912
FID
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1
998-25640
FD0913
FID
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998-25640
FD0914
FID
0.7SM0.5SQ-NSP
1
998-25640
FD0915
FID
0.7SM0.5SQ-NSP
1
998-25640
FD0916
FID
0.7SM0.5SQ-NSP
1
998-25640
FD0917
FID
0.7SM0.5SQ-NSP
1
998-25640
FD0918
FID
0.7SM0.5SQ-NSP
1
998-25640

PAGE TITLE
SYSTEM: Mechanical (9)

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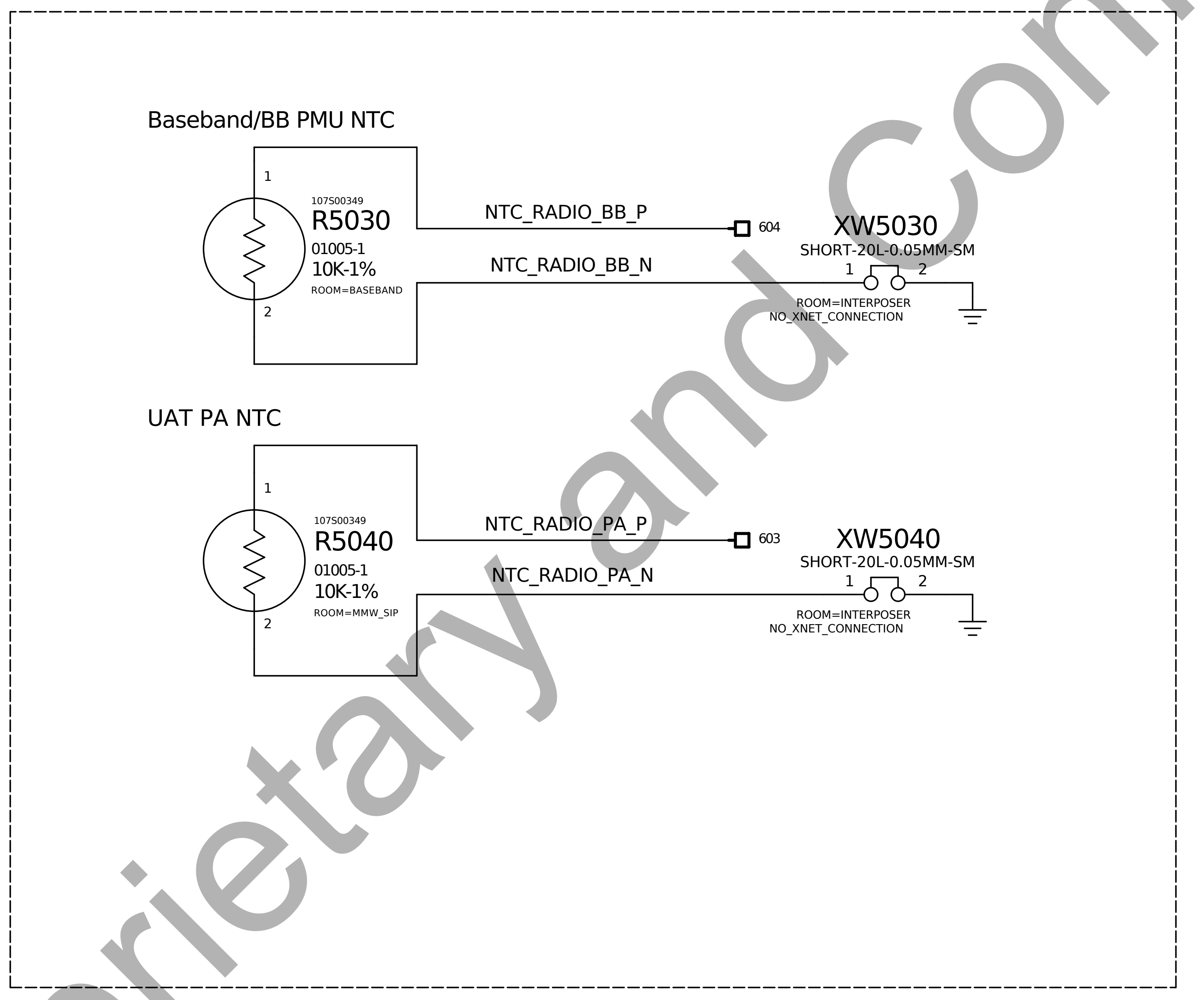
Bot MLB NTCs

Place NTC XWs near interposer pins for _P nets
Route P/N differentially


Baseband/BB PMU NTC
1
107S00349
R5030
01005-1
10K-1%
ROOM=BASEBAND
2
NTC_RADIO_BB_P
604
NTC_RADIO_BB_N
XW5030
SHORT-20L-0.05MM-SM
1
2
ROOM=INTERPOSER
NO_XNET_CONNECTION
UAT PA NTC
1
107S00349
R5040
01005-1
10K-1%
ROOM=MMW_SIP
2
NTC_RADIO_PA_P
603
NTC_RADIO_PA_N
XW5040
SHORT-20L-0.05MM-SM
1
2
ROOM=INTERPOSER
NO_XNET_CONNECTION

PAGE TITLE
SYS PWR: NTCs (Bottom) (50)

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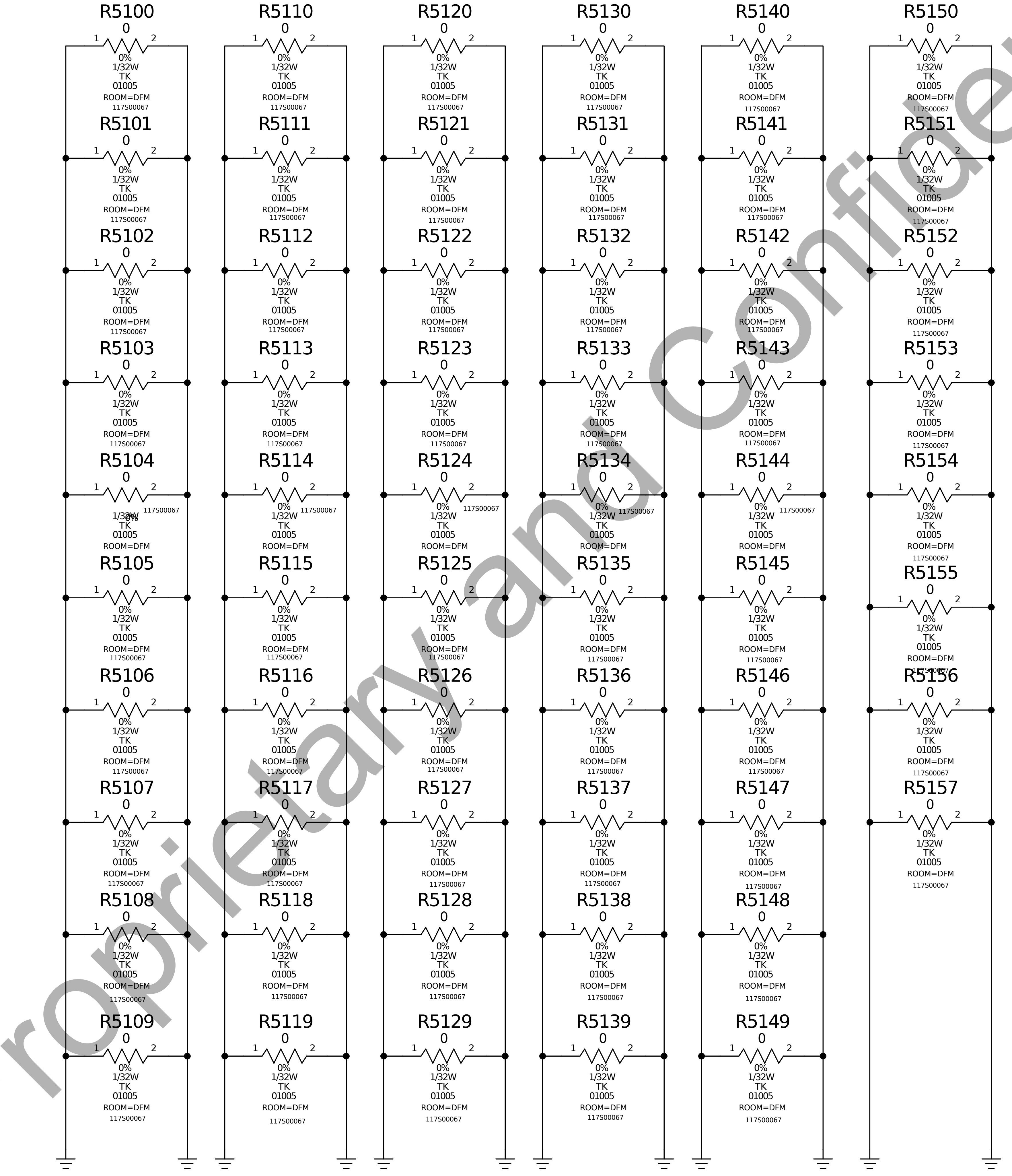
UF RESISTORS


R5100
R5101
R5102
R5103
R5104
R5105
R5106
R5107
R5108
R5109
R5110
R5111
R5112
R5113
R5114
R5115
R5116
R5117
R5118
R5119
R5120
R5121
R5122
R5123
R5124
R5125
R5126
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R5130
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R5135
R5136
R5137
R5138
R5139
R5140
R5141
R5142
R5143
R5144
R5145
R5146
R5147
R5148
R5149
R5150
R5151
R5152
R5153
R5154
R5155
R5156
R5157
0
1
2
0%
1/32W
TK
01005
ROOM=DFM
117500067

PAGE TITLE

UF DUMMIES (51)

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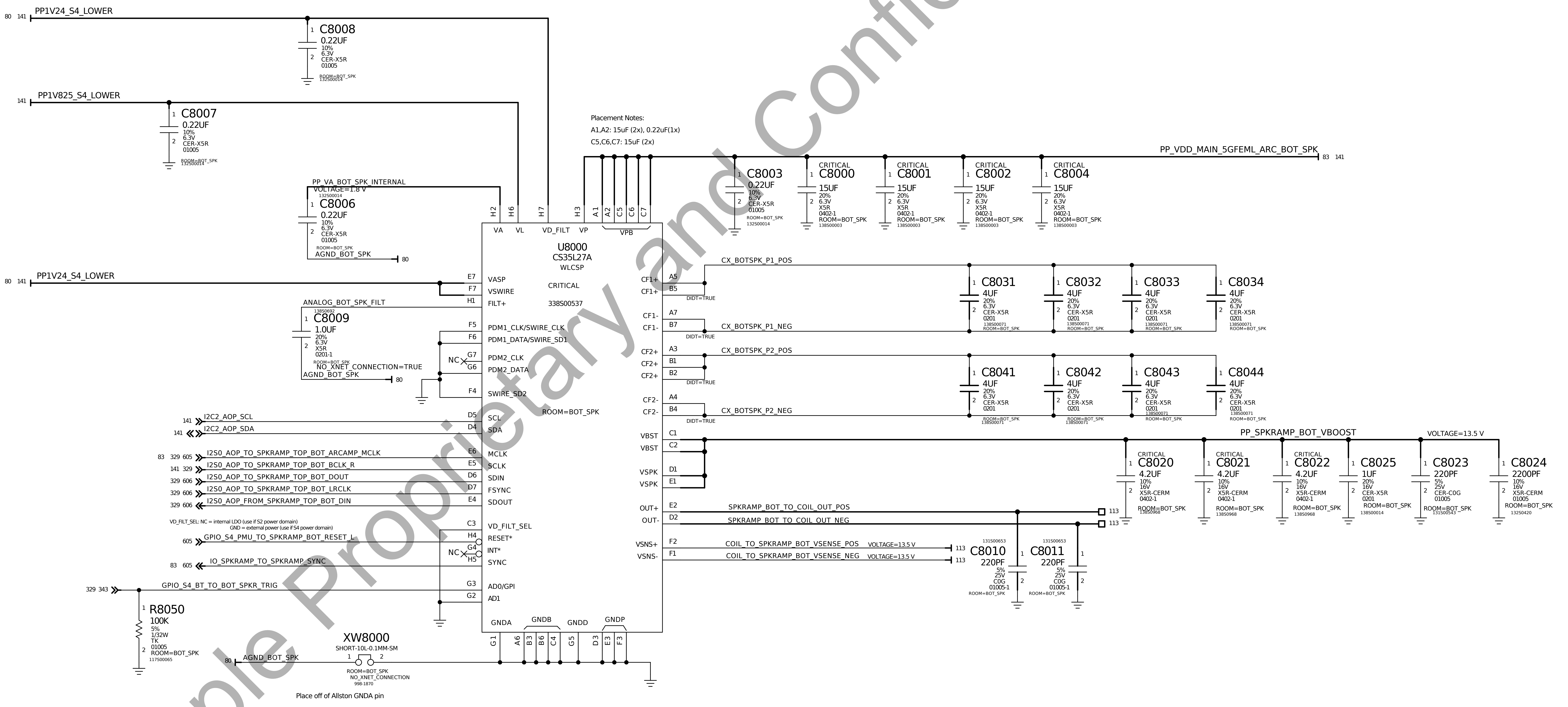
BOT SPEAKER AMP

POWER DOMAIN NOTES:
1. Use S4 domain if possible, then GND VD_FILT_SEL
2. Can use S2 domain if routing constrained, then NC VD_FILT_SEL

Placement Notes:
A1,A2: 15uF (2x), 0.22uF(1x)
C5,C6,C7: 15uF (2x)



PP1V24_S4_LOWER
80 141
C8008
0.22UF
10%
6.3V
CER-X5R
01005
ROOM=BOT_SPK
PP1V825_S4_LOWER
141
C8007
0.22UF
PP_VA_BOT_SPK_INTERNAL
VOLTAGE=1.8 V
C8006
0.22UF
AGND_BOT_SPK
80
ANALOG_BOT_SPK_FILT
C8009
1.0UF
20%
6.3V
X5R
0201-1
NO_XNET_CONNECTION=TRUE
NC
I2C2_AOP_SCL
I2C2_AOP_SDA
I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK
I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK_R
I2S0_AOP_TO_SPKRAMP_TOP_BOT_DOUT
I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK
I2S0_AOP_FROM_SPKRAMP_TOP_BOT_DIN
VD_FILT_SEL: NC = internal LDO (use if S2 power domain)
GND = external power (use if S4 power domain)
GPIO_S4_PMU_TO_SPKRAMP_BOT_RESET_L
IO_SPKRAMP_TO_SPKRAMP_SYNC
GPIO_S4_BT_TO_BOT_SPKR_TRIG
329 343
R8050
100K
5%
1/32W
TK
01005
XW8000
SHORT-10L-0.1MM-SM
NO_XNET_CONNECTION
Place off of Allston GNDA pin
U8000
CS35L27A
WLCSP
CRITICAL
338S00537
ROOM=BOT_SPK
VA VL VD_FILT VP VPB
VASP
VSWIRE
FILT+
PDM1_CLK/SWIRE_CLK
PDM1_DATA/SWIRE_SD1
PDM2_CLK
PDM2_DATA
SWIRE_SD2
SCL
SDA
MCLK
SCLK
SDIN
FSYNC
SDOUT
VD_FILT_SEL
RESET*
INT*
SYNC
AD0/GPI
AD1
GNDA GNDB GNDD GNDP
CF1+ CF1- CF2+ CF2-
VBST
VSPK
OUT+
OUT-
VSNS+
VSNS-
DIDT=TRUE
PP_VDD_MAIN_5GFEML_ARC_BOT_SPK
83 141
C8003
0.22UF
CRITICAL
C8000
C8001
C8002
C8004
15UF
20%
6.3V
X5R
0402-1
CX_BOTSPK_P1_POS
CX_BOTSPK_P1_NEG
CX_BOTSPK_P2_POS
CX_BOTSPK_P2_NEG
C8031
C8032
C8033
C8034
C8041
C8042
C8043
C8044
4UF
20%
6.3V
CER-X5R
0201
PP_SPKRAMP_BOT_VBOOST
VOLTAGE=13.5 V
C8020
C8021
C8022
4.2UF
10%
16V
X5R-CERM
0402-1
C8025
1UF
C8023
220PF
5%
25V
CER-C0G
C8024
2200PF
SPKRAMP_BOT_TO_COIL_OUT_POS
SPKRAMP_BOT_TO_COIL_OUT_NEG
113
COIL_TO_SPKRAMP_BOT_VSENSE_POS
COIL_TO_SPKRAMP_BOT_VSENSE_NEG
C8010
C8011
220PF
C0G
01005-1

PAGE TITLE

AUDIO: Bot Speaker Amp (80)

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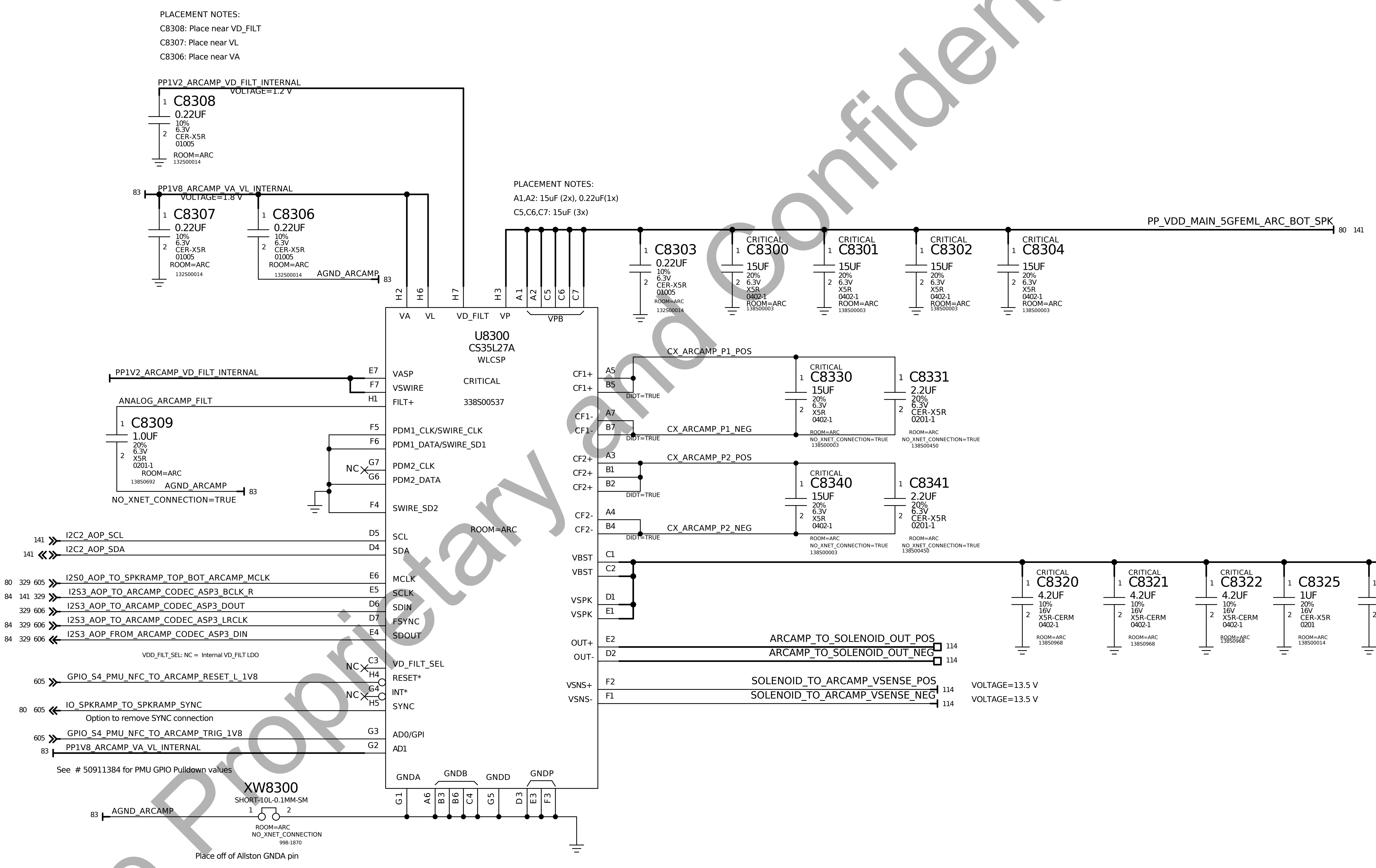
SPEAKER AMP


PLACEMENT NOTES:
C8308: Place near VD_FILT
C8307: Place near VL
C8306: Place near VA
PP1V2_ARCAMP_VD_FILT_INTERNAL
VOLTAGE=1.2 V
C8308 0.22UF 10% 6.3V CER-X5R 01005 ROOM=ARC 132S00014
PP1V8_ARCAMP_VA_VL_INTERNAL
VOLTAGE=1.8 V
C8307 0.22UF 10% 6.3V CER-X5R 01005 ROOM=ARC 132S00014
C8306 0.22UF 10% 6.3V CER-X5R 01005 ROOM=ARC 132S00014
AGND_ARCAMP
PLACEMENT NOTES:
A1,A2: 15uF (2x), 0.22uF(1x)
C5,C6,C7: 15uF (3x)
PP_VDD_MAIN_5GFEML_ARC_BOT_SPK
C8303 0.22UF 10% 6.3V CER-X5R 01005 ROOM=ARC 132S00014
CRITICAL C8300 15UF 20% 6.3V X5R 0402-1 ROOM=ARC 138S00003
CRITICAL C8301 15UF 20% 6.3V X5R 0402-1 ROOM=ARC 138S00003
CRITICAL C8302 15UF 20% 6.3V X5R 0402-1 ROOM=ARC 138S00003
CRITICAL C8304 15UF 20% 6.3V X5R 0402-1 ROOM=ARC 138S00003
U8300
CS35L27A
WLCSP
CRITICAL
338S00537
ROOM=ARC
VA VL VD_FILT VP VPB
VASP VSWIRE FILT+ PDM1_CLK/SWIRE_CLK PDM1_DATA/SWIRE_SD1 PDM2_CLK PDM2_DATA SWIRE_SD2
SCL SDA MCLK SCLK SDIN FSYNC SDOUT VD_FILT_SEL RESET* INT* SYNC AD0/GPI AD1
GNDA GNDB GNDD GNDP
CF1+ CF1+ CF1- CF1- CF2+ CF2+ CF2+ CF2- CF2- VBST VBST VSPK VSPK OUT+ OUT- VSNS+ VSNS-
PP1V2_ARCAMP_VD_FILT_INTERNAL
ANALOG_ARCAMP_FILT
C8309 1.0UF 20% 6.3V X5R 0201-1 ROOM=ARC 138S0692
AGND_ARCAMP
NO_XNET_CONNECTION=TRUE
NC
I2C2_AOP_SCL
I2C2_AOP_SDA
I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK
I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK_R
I2S3_AOP_TO_ARCAMP_CODEC_ASP3_DOUT
I2S3_AOP_TO_ARCAMP_CODEC_ASP3_LRCLK
I2S3_AOP_FROM_ARCAMP_CODEC_ASP3_DIN
VDD_FILT_SEL: NC = Internal VD_FILT LDO
GPIO_S4_PMU_NFC_TO_ARCAMP_RESET_L_1V8
IO_SPKRAMP_TO_SPKRAMP_SYNC
Option to remove SYNC connection
GPIO_S4_PMU_NFC_TO_ARCAMP_TRIG_1V8
PP1V8_ARCAMP_VA_VL_INTERNAL
See # 50911384 for PMU GPIO Pulldown values
XW8300
SHORT-10L-0.1MM-SM
AGND_ARCAMP
ROOM=ARC
NO_XNET_CONNECTION
998-1870
Place off of Allston GNDA pin
CX_ARCAMP_P1_POS
CX_ARCAMP_P1_NEG
CX_ARCAMP_P2_POS
CX_ARCAMP_P2_NEG
DIDT=TRUE
CRITICAL C8330 15UF 20% 6.3V X5R 0402-1 ROOM=ARC NO_XNET_CONNECTION=TRUE 138S00003
C8331 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=ARC NO_XNET_CONNECTION=TRUE 138S00450
CRITICAL C8340 15UF 20% 6.3V X5R 0402-1 ROOM=ARC NO_XNET_CONNECTION=TRUE 138S00003
C8341 2.2UF 20% 6.3V CER-X5R 0201-1 ROOM=ARC NO_XNET_CONNECTION=TRUE 138S00450
VOLTAGE=13.5 V
PP_ARCAMP_VBOOST
CRITICAL C8320 4.2UF 10% 16V X5R-CERM 0402-1 ROOM=ARC 138S0968
CRITICAL C8321 4.2UF 10% 16V X5R-CERM 0402-1 ROOM=ARC 138S0968
CRITICAL C8322 4.2UF 10% 16V X5R-CERM 0402-1 ROOM=ARC 138S0968
C8325 1UF 20% 16V CER-X5R 0201 ROOM=ARC 138S00014
C8323 220PF 5% 25V CER-C0G 01005 ROOM=ARC 131S00043
C8324 2200PF 10% 16V X5R-CERM 01005 ROOM=ARC 132S0420
ARCAMP_TO_SOLENOID_OUT_POS
ARCAMP_TO_SOLENOID_OUT_NEG
SOLENOID_TO_ARCAMP_VSENSE_POS
SOLENOID_TO_ARCAMP_VSENSE_NEG
VOLTAGE=13.5 V
VOLTAGE=13.5 V
114

PAGE TITLE

HAPTIC: Haptic Amp (83)

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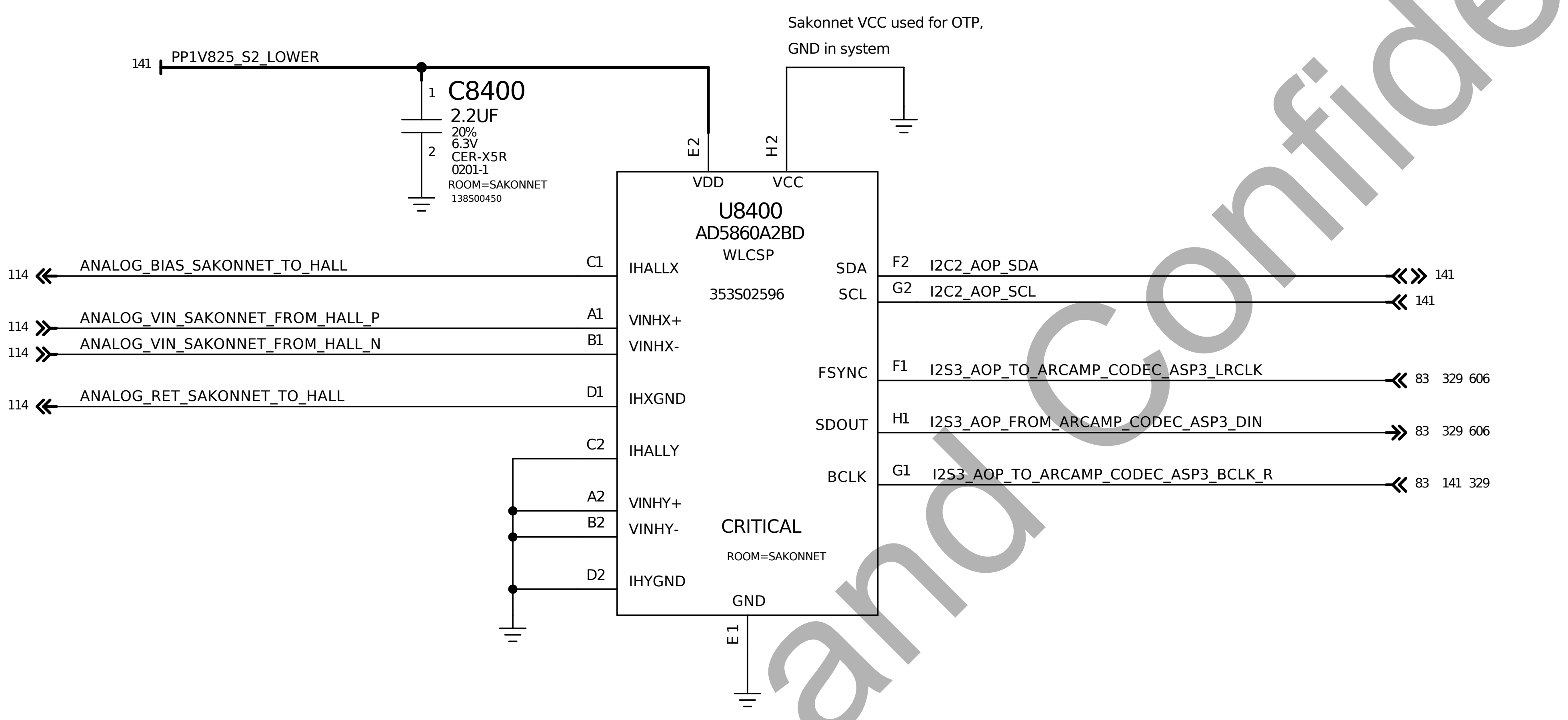
HALL SENSOR


Sakonnet VCC used for OTP,
GND in system
141
PP1V825_S2_LOWER
1
2
C8400
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=SAKONNET
138S00450
E2
H2
VDD
VCC
U8400
AD5860A2BD
WLCSP
353S02596
114
ANALOG_BIAS_SAKONNET_TO_HALL
C1
IHALLX
114
ANALOG_VIN_SAKONNET_FROM_HALL_P
A1
VINHX+
114
ANALOG_VIN_SAKONNET_FROM_HALL_N
B1
VINHX-
114
ANALOG_RET_SAKONNET_TO_HALL
D1
IHXGND
C2
IHALLY
A2
VINHY+
B2
VINHY-
D2
IHYGND
CRITICAL
ROOM=SAKONNET
GND
E1
SDA
F2
I2C2_AOP_SDA
141
SCL
G2
I2C2_AOP_SCL
141
FSYNC
F1
I2S3_AOP_TO_ARCAMP_CODEC_ASP3_LRCLK
83 329 606
SDOUT
H1
I2S3_AOP_FROM_ARCAMP_CODEC_ASP3_DIN
83 329 606
BCLK
G1
I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK_R
83 141 329

PAGE TITLE

HAPTIC: Sakonnet (84)

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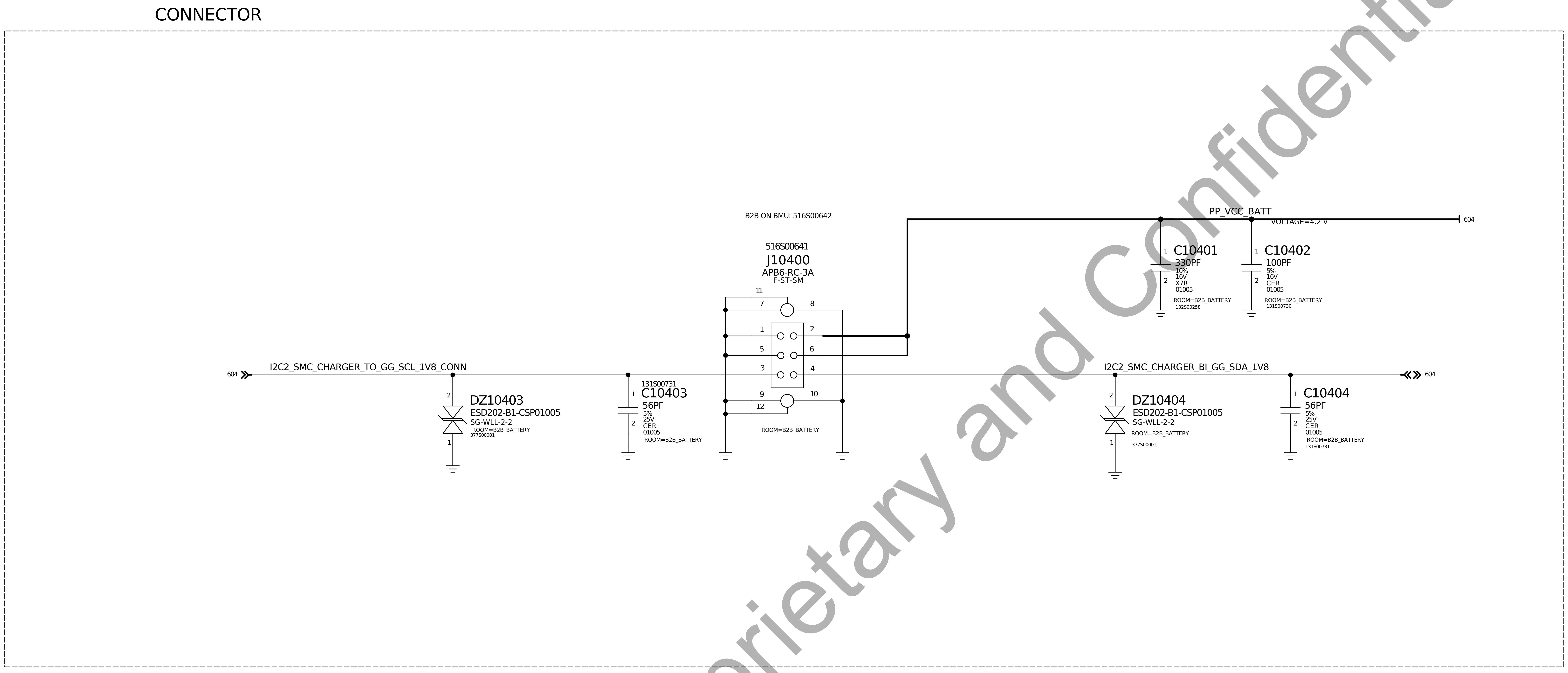
BATTERY B2B


CONNECTOR
B2B ON BMU: 516S00642
516S00641
J10400
APB6-RC-3A
F-ST-SM
11
7
8
1
2
5
6
3
4
9
10
12
ROOM=B2B_BATTERY
PP_VCC_BATT
VOLTAGE=4.2 V
604
C10401
330PF
10%
16V
X7R
01005
ROOM=B2B_BATTERY
132S00258
C10402
100PF
5%
16V
CER
01005
ROOM=B2B_BATTERY
131S00730
604
I2C2_SMC_CHARGER_TO_GG_SCL_1V8_CONN
DZ10403
ESD202-B1-CSP01005
SG-WLL-2-2
ROOM=B2B_BATTERY
377S00001
131S00731
C10403
56PF
5%
25V
CER
01005
ROOM=B2B_BATTERY
I2C2_SMC_CHARGER_BI_GG_SDA_1V8
604
DZ10404
ESD202-B1-CSP01005
SG-WLL-2-2
ROOM=B2B_BATTERY
377S00001
C10404
56PF
5%
25V
CER
01005
ROOM=B2B_BATTERY
131S00731

PAGE TITLE

B2B: Battery (104)

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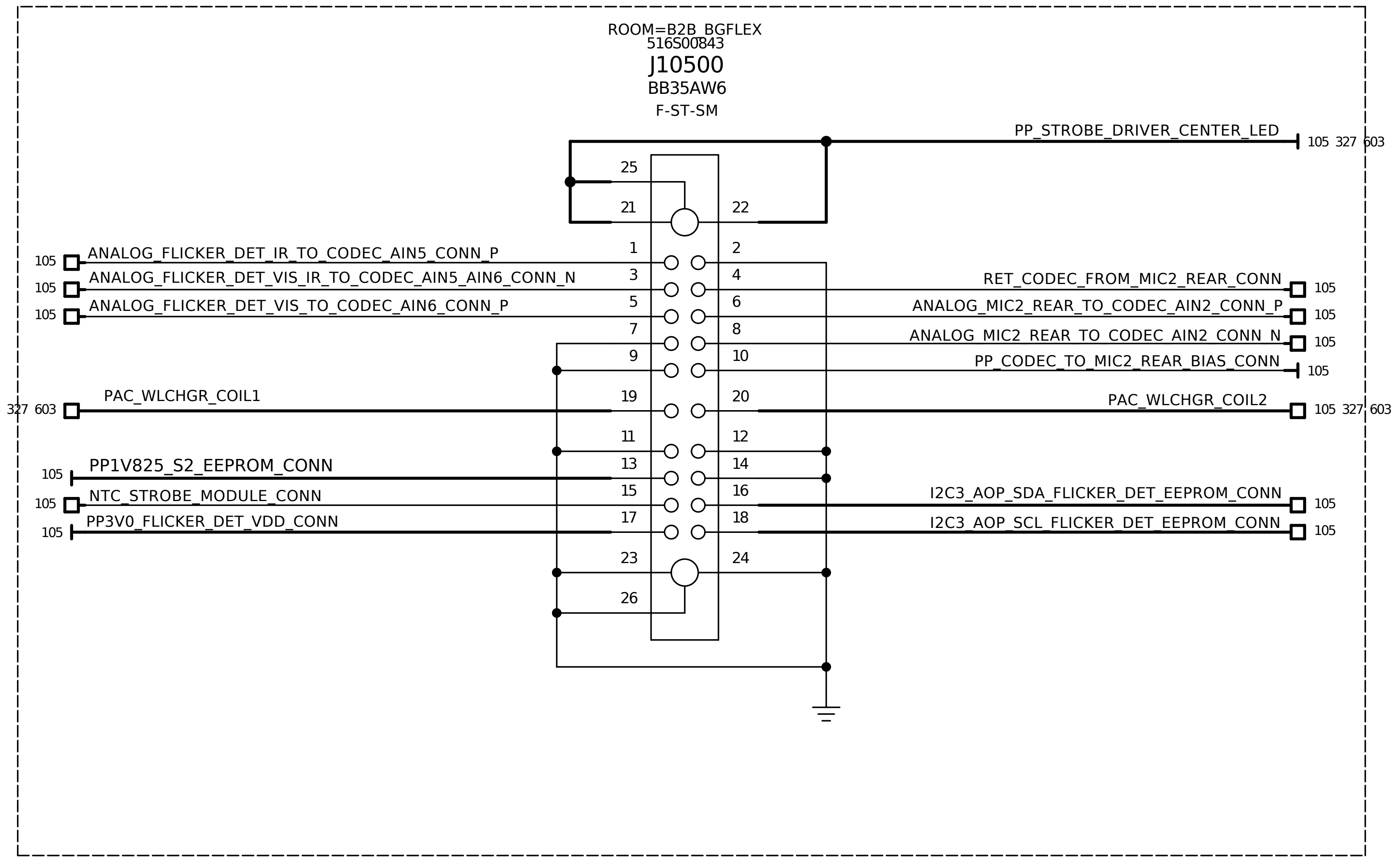
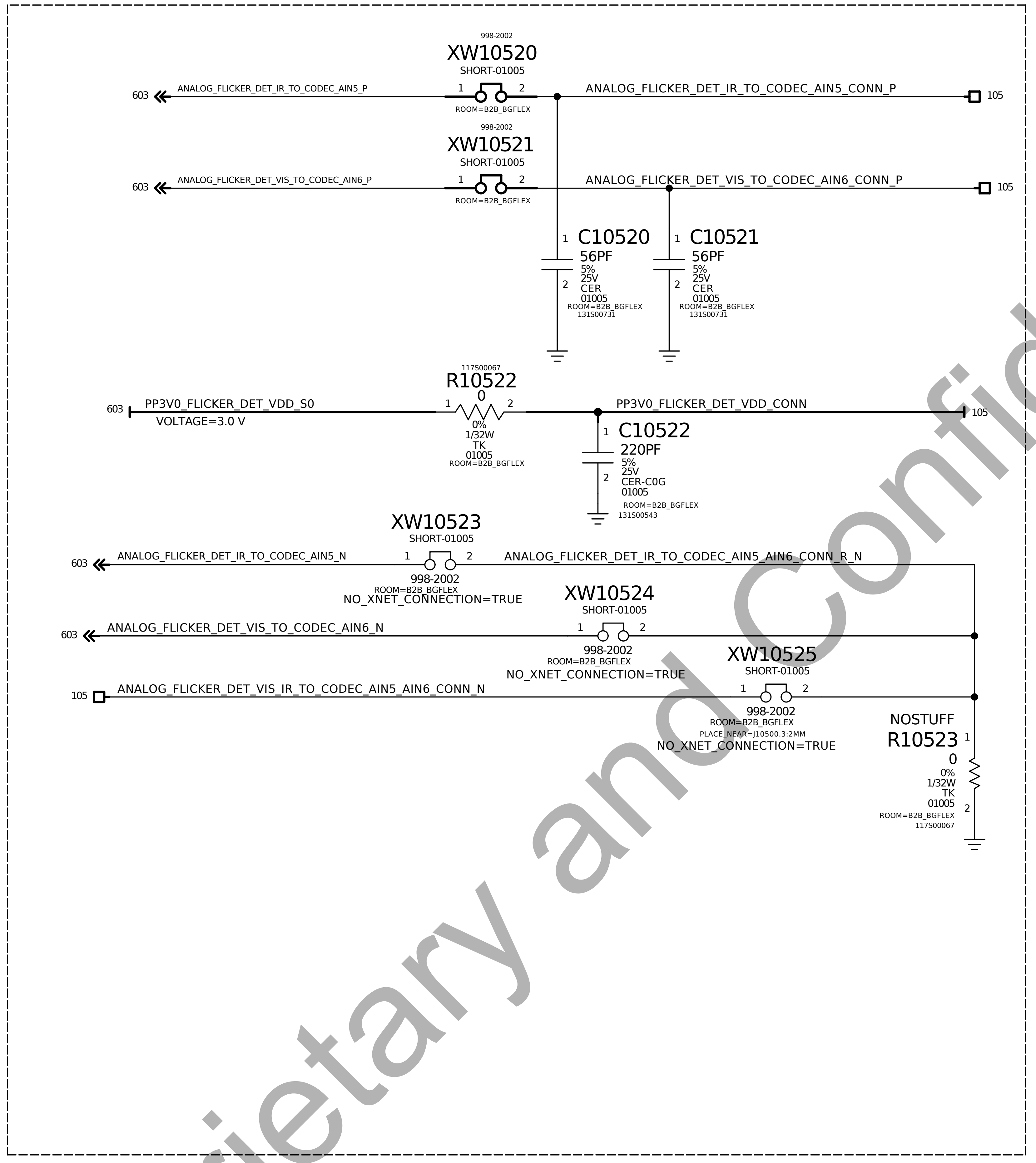
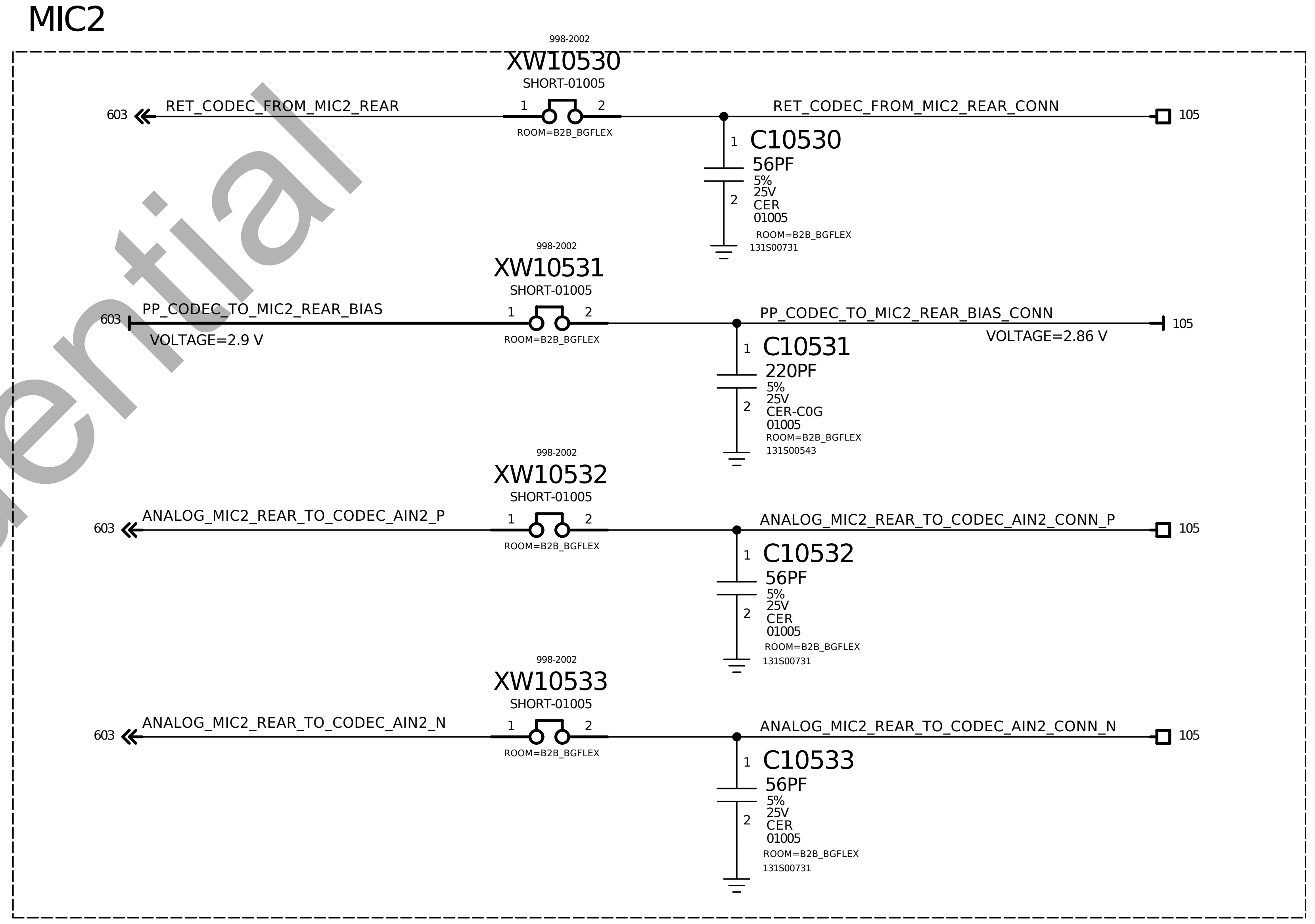
BG Flex B2B

CONNECTOR

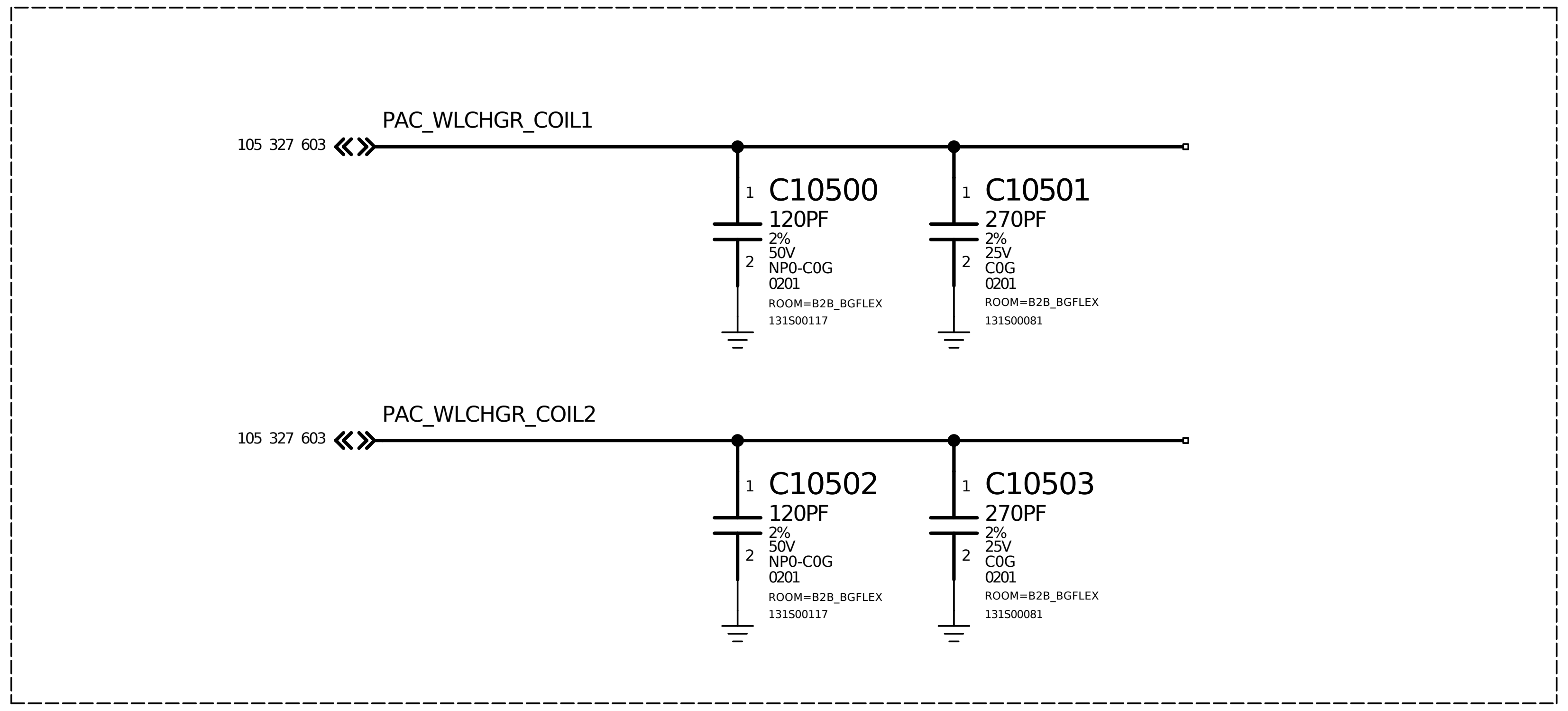

ROOM=B2B_BGFLEX
516S00843
J10500
BB35AW6
F-ST-SM
PP_STROBE_DRIVER_CENTER_LED 105 327 603
25
21
22
105 ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_CONN_P 1 2
105 ANALOG_FLICKER_DET_VIS_IR_TO_CODEC_AIN5_AIN6_CONN_N 3 4 RET_CODEC_FROM_MIC2_REAR_CONN 105
105 ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_CONN_P 5 6 ANALOG_MIC2_REAR_TO_CODEC_AIN2_CONN_P 105
7 8 ANALOG_MIC2_REAR_TO_CODEC_AIN2_CONN_N 105
9 10 PP_CODEC_TO_MIC2_REAR_BIAS_CONN 105
105 327 603 PAC_WLCHGR_COIL1 19 20 PAC_WLCHGR_COIL2 105 327 603
11 12
105 PP1V825_S2_EEPROM_CONN 13 14
105 NTC_STROBE_MODULE_CONN 15 16 I2C3_AOP_SDA_FLICKER_DET_EEPROM_CONN 105
105 PP3V0_FLICKER_DET_VDD_CONN 17 18 I2C3_AOP_SCL_FLICKER_DET_EEPROM_CONN 105
23 24
26


998-2002
XW10520
SHORT-01005
603 ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_P 1 2
ROOM=B2B_BGFLEX
ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_CONN_P 105
998-2002
XW10521
SHORT-01005
603 ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_P 1 2
ROOM=B2B_BGFLEX
ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_CONN_P 105
C10520 56PF 5% 25V CER 01005 ROOM=B2B_BGFLEX 131S00731
C10521 56PF 5% 25V CER 01005 ROOM=B2B_BGFLEX 131S00731
117S00067
R10522
0
603 PP3V0_FLICKER_DET_VDD_S0
VOLTAGE=3.0 V
0% 1/32W TK 01005 ROOM=B2B_BGFLEX
PP3V0_FLICKER_DET_VDD_CONN 105
C10522 220PF 5% 25V CER-C0G 01005 ROOM=B2B_BGFLEX 131S00543
XW10523
SHORT-01005
603 ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_N 1 2
998-2002
ROOM=B2B_BGFLEX
NO_XNET_CONNECTION=TRUE
ANALOG_FLICKER_DET_IR_TO_CODEC_AIN5_AIN6_CONN_R_N
XW10524
SHORT-01005
603 ANALOG_FLICKER_DET_VIS_TO_CODEC_AIN6_N 1 2
998-2002
ROOM=B2B_BGFLEX
NO_XNET_CONNECTION=TRUE
XW10525
SHORT-01005
105 ANALOG_FLICKER_DET_VIS_IR_TO_CODEC_AIN5_AIN6_CONN_N 1 2
998-2002
ROOM=B2B_BGFLEX
PLACE_NEAR=J10500.3:2MM
NO_XNET_CONNECTION=TRUE
NOSTUFF
R10523
0
0% 1/32W TK 01005 ROOM=B2B_BGFLEX 117S00067

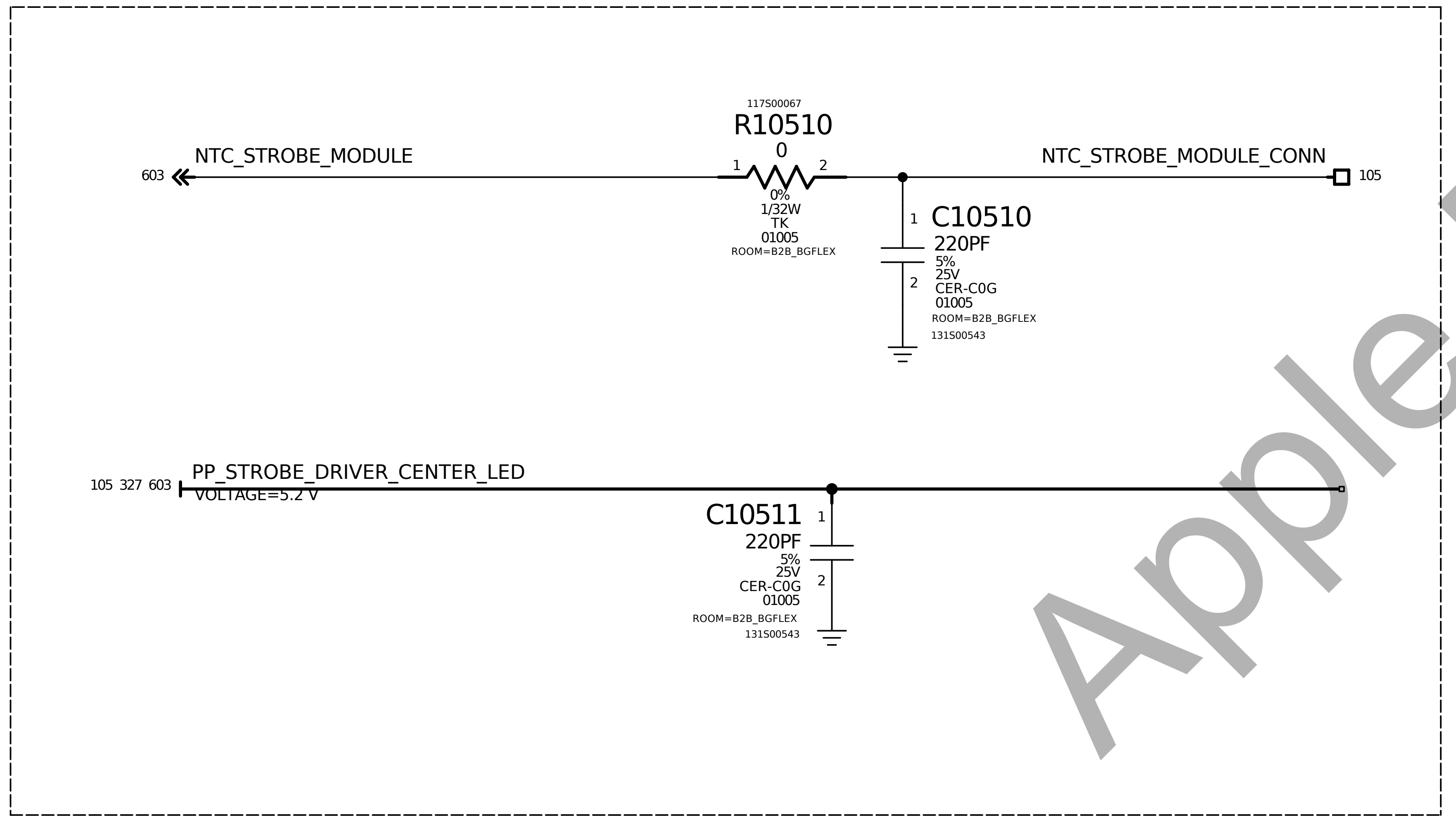
MIC2


998-2002
XW10530
SHORT-01005
603 RET_CODEC_FROM_MIC2_REAR 1 2
ROOM=B2B_BGFLEX
RET_CODEC_FROM_MIC2_REAR_CONN 105
C10530 56PF 5% 25V CER 01005 ROOM=B2B_BGFLEX 131S00731
998-2002
XW10531
SHORT-01005
603 PP_CODEC_TO_MIC2_REAR_BIAS 1 2
VOLTAGE=2.9 V
ROOM=B2B_BGFLEX
PP_CODEC_TO_MIC2_REAR_BIAS_CONN 105
VOLTAGE=2.86 V
C10531 220PF 5% 25V CER-C0G 01005 ROOM=B2B_BGFLEX 131S00543
998-2002
XW10532
SHORT-01005
603 ANALOG_MIC2_REAR_TO_CODEC_AIN2_P 1 2
ROOM=B2B_BGFLEX
ANALOG_MIC2_REAR_TO_CODEC_AIN2_CONN_P 105
C10532 56PF 5% 25V CER 01005 ROOM=B2B_BGFLEX 131S00731
998-2002
XW10533
SHORT-01005
603 ANALOG_MIC2_REAR_TO_CODEC_AIN2_N 1 2
ROOM=B2B_BGFLEX
ANALOG_MIC2_REAR_TO_CODEC_AIN2_CONN_N 105
C10533 56PF 5% 25V CER 01005 ROOM=B2B_BGFLEX 131S00731

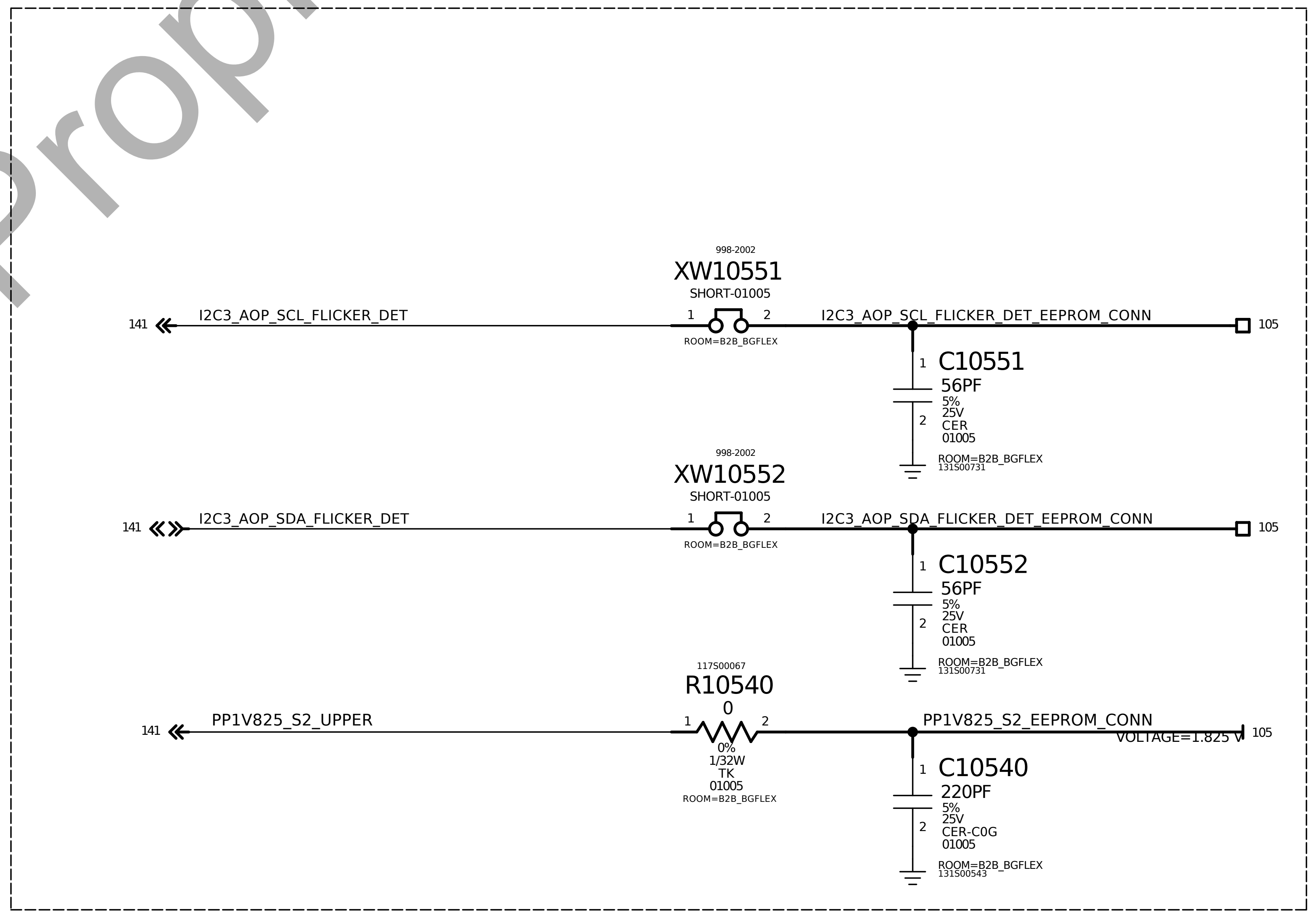
CHROMITE FILTERS


105 327 603 PAC_WLCHGR_COIL1
C10500 120PF 2% 50V NP0-C0G 0201 ROOM=B2B_BGFLEX 131S00117
C10501 270PF 2% 25V C0G 0201 ROOM=B2B_BGFLEX 131S00081
105 327 603 PAC_WLCHGR_COIL2
C10502 120PF 2% 50V NP0-C0G 0201 ROOM=B2B_BGFLEX 131S00117
C10503 270PF 2% 25V C0G 0201 ROOM=B2B_BGFLEX 131S00081

Strobe


117S00067
R10510
0
603 NTC_STROBE_MODULE 1 2
0% 1/32W TK 01005 ROOM=B2B_BGFLEX
NTC_STROBE_MODULE_CONN 105
C10510 220PF 5% 25V CER-C0G 01005 ROOM=B2B_BGFLEX 131S00543
105 327 603 PP_STROBE_DRIVER_CENTER_LED
VOLTAGE=5.2 V
C10511 220PF 5% 25V CER-C0G 01005 ROOM=B2B_BGFLEX 131S00543

IO FILTERS


998-2002
XW10551
SHORT-01005
141 I2C3_AOP_SCL_FLICKER_DET 1 2
ROOM=B2B_BGFLEX
I2C3_AOP_SCL_FLICKER_DET_EEPROM_CONN 105
C10551 56PF 5% 25V CER 01005 ROOM=B2B_BGFLEX 131S00731
998-2002
XW10552
SHORT-01005
141 I2C3_AOP_SDA_FLICKER_DET 1 2
ROOM=B2B_BGFLEX
I2C3_AOP_SDA_FLICKER_DET_EEPROM_CONN 105
C10552 56PF 5% 25V CER 01005 ROOM=B2B_BGFLEX 131S00731
117S00067
R10540
0
141 PP1V825_S2_UPPER 1 2
0% 1/32W TK 01005 ROOM=B2B_BGFLEX
PP1V825_S2_EEPROM_CONN 105
VOLTAGE=1.825 V
C10540 220PF 5% 25V CER-C0G 01005 ROOM=B2B_BGFLEX 131S00543

PAGE TITLE
B2B: BG Flex (105)

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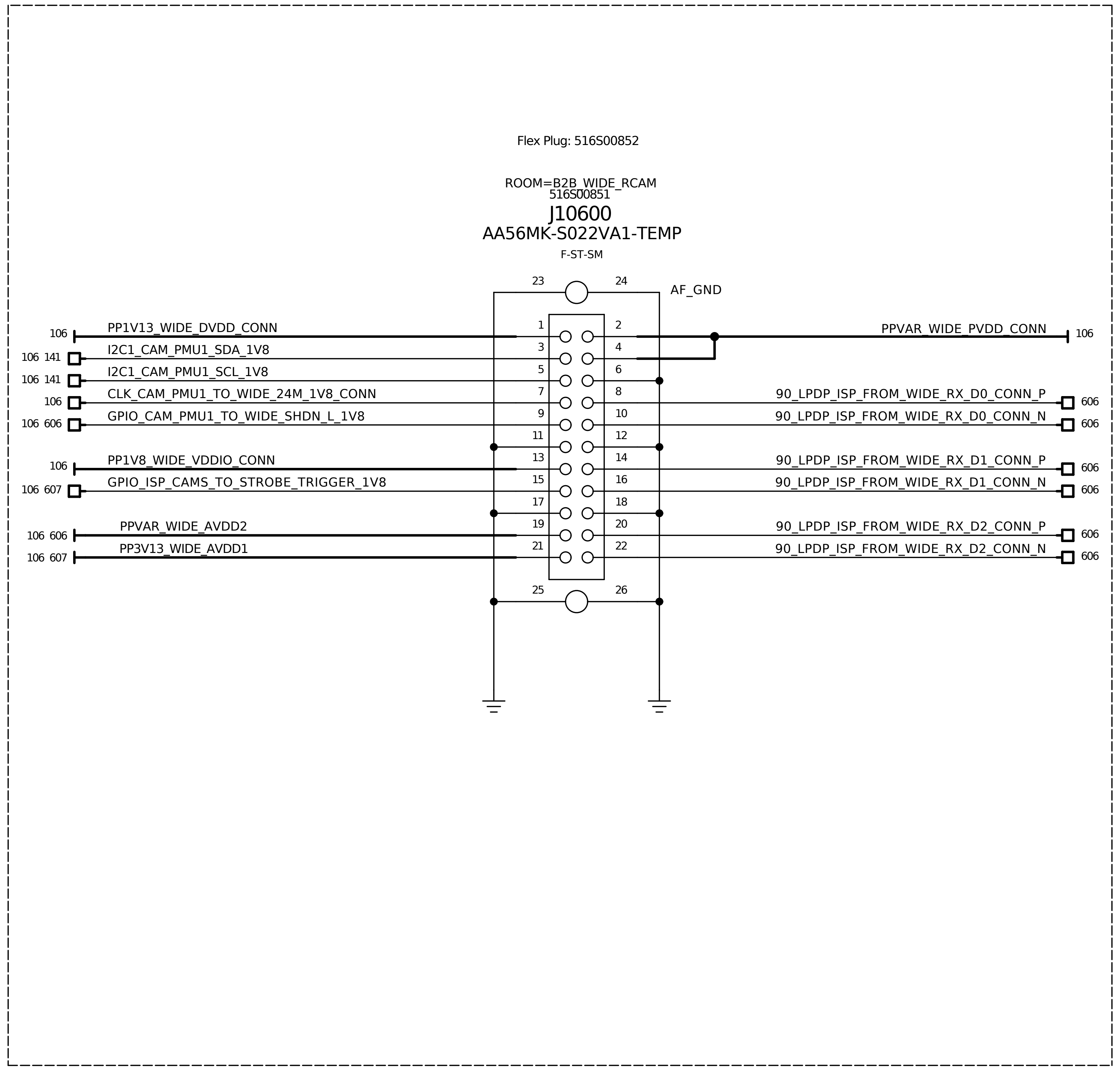
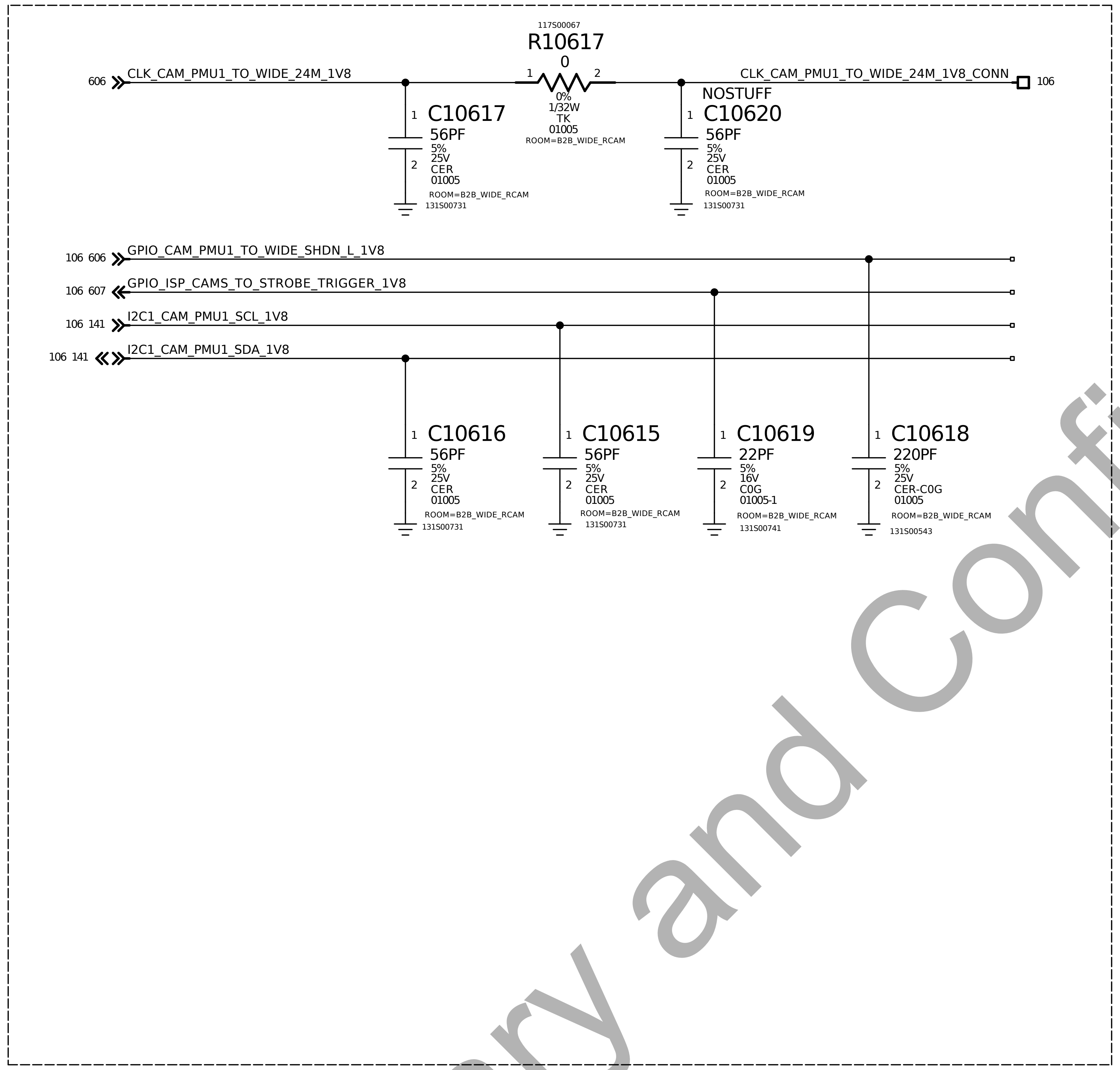
WIDE CAMERA B2B

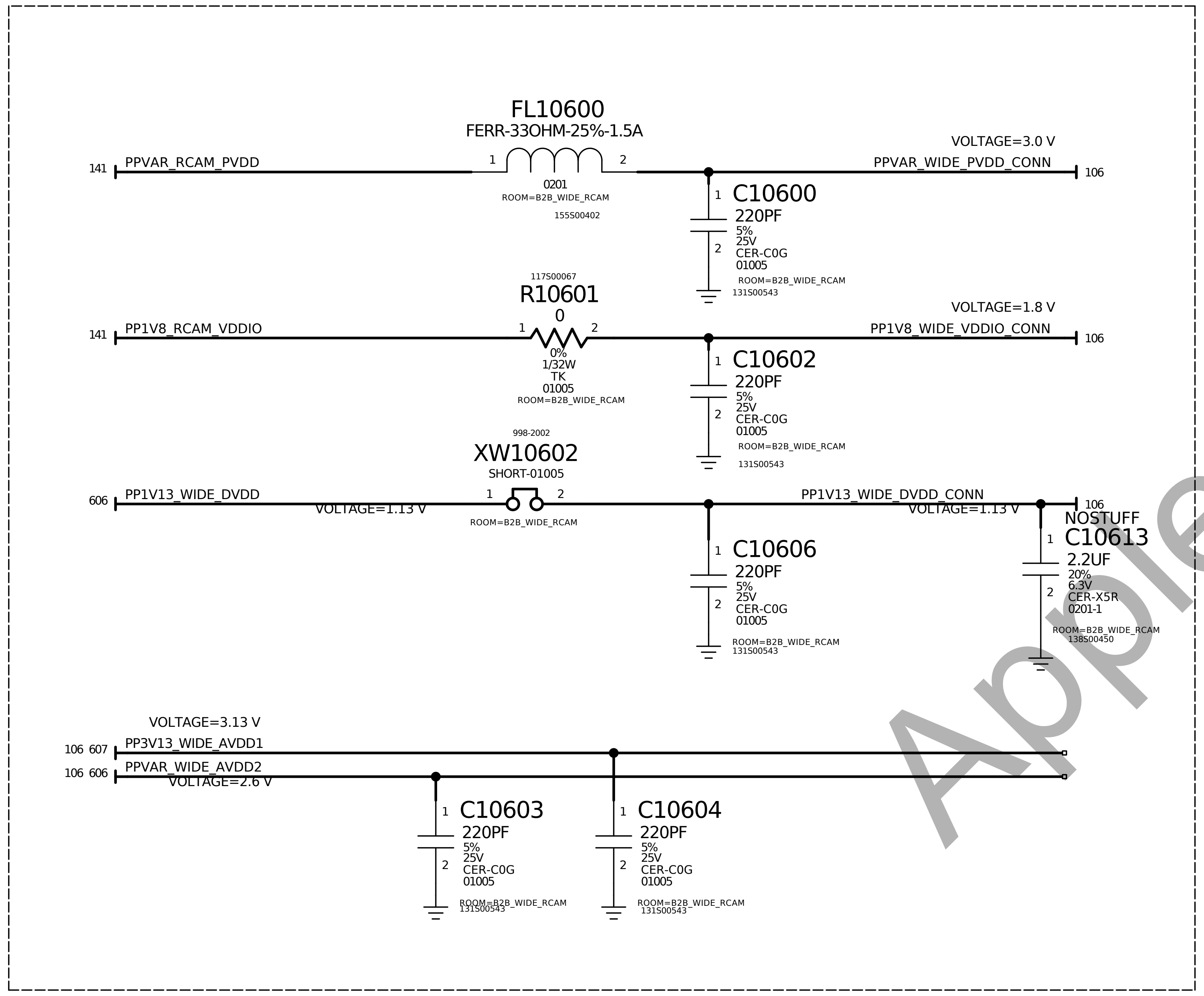
CONNECTOR


Flex Plug: 516S00852
ROOM=B2B_WIDE_RCAM
516S00851
J10600
AA56MK-S022VA1-TEMP
F-ST-SM
AF_GND
106 PP1V13_WIDE_DVDD_CONN
106 141 I2C1_CAM_PMU1_SDA_1V8
106 141 I2C1_CAM_PMU1_SCL_1V8
106 CLK_CAM_PMU1_TO_WIDE_24M_1V8_CONN
106 606 GPIO_CAM_PMU1_TO_WIDE_SHDN_L_1V8
106 PP1V8_WIDE_VDDIO_CONN
106 607 GPIO_ISP_CAMS_TO_STROBE_TRIGGER_1V8
106 606 PPVAR_WIDE_AVDD2
106 607 PP3V13_WIDE_AVDD1
PPVAR_WIDE_PVDD_CONN 106
90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_P 606
90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_N 606
90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_P 606
90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_N 606
90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_P 606
90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_N 606

IO FILTERS


117S00067
R10617
0
0%
1/32W
TK
01005
ROOM=B2B_WIDE_RCAM
606 CLK_CAM_PMU1_TO_WIDE_24M_1V8
CLK_CAM_PMU1_TO_WIDE_24M_1V8_CONN 106
C10617
56PF
5%
25V
CER
01005
ROOM=B2B_WIDE_RCAM
131S00731
NOSTUFF
C10620
56PF
5%
25V
CER
01005
ROOM=B2B_WIDE_RCAM
131S00731
106 606 GPIO_CAM_PMU1_TO_WIDE_SHDN_L_1V8
106 607 GPIO_ISP_CAMS_TO_STROBE_TRIGGER_1V8
106 141 I2C1_CAM_PMU1_SCL_1V8
106 141 I2C1_CAM_PMU1_SDA_1V8
C10616
56PF
5%
25V
CER
01005
ROOM=B2B_WIDE_RCAM
131S00731
C10615
56PF
5%
25V
CER
01005
ROOM=B2B_WIDE_RCAM
131S00731
C10619
22PF
5%
16V
C0G
01005-1
ROOM=B2B_WIDE_RCAM
131S00741
C10618
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_WIDE_RCAM
131S00543

POWER FILTERS


FL10600
FERR-33OHM-25%-1.5A
0201
ROOM=B2B_WIDE_RCAM
155S00402
141 PPVAR_RCAM_PVDD
VOLTAGE=3.0 V
PPVAR_WIDE_PVDD_CONN 106
C10600
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_WIDE_RCAM
131S00543
117S00067
R10601
0
0%
1/32W
TK
01005
ROOM=B2B_WIDE_RCAM
141 PP1V8_RCAM_VDDIO
VOLTAGE=1.8 V
PP1V8_WIDE_VDDIO_CONN 106
C10602
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_WIDE_RCAM
131S00543
998-2002
XW10602
SHORT-01005
ROOM=B2B_WIDE_RCAM
606 PP1V13_WIDE_DVDD
VOLTAGE=1.13 V
PP1V13_WIDE_DVDD_CONN 106
VOLTAGE=1.13 V
C10606
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_WIDE_RCAM
131S00543
NOSTUFF
C10613
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=B2B_WIDE_RCAM
138S00450
VOLTAGE=3.13 V
106 607 PP3V13_WIDE_AVDD1
106 606 PPVAR_WIDE_AVDD2
VOLTAGE=2.6 V
C10603
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_WIDE_RCAM
131S00543
C10604
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_WIDE_RCAM
131S00543

PAGE TITLE
B2B: Camera Wide (106)

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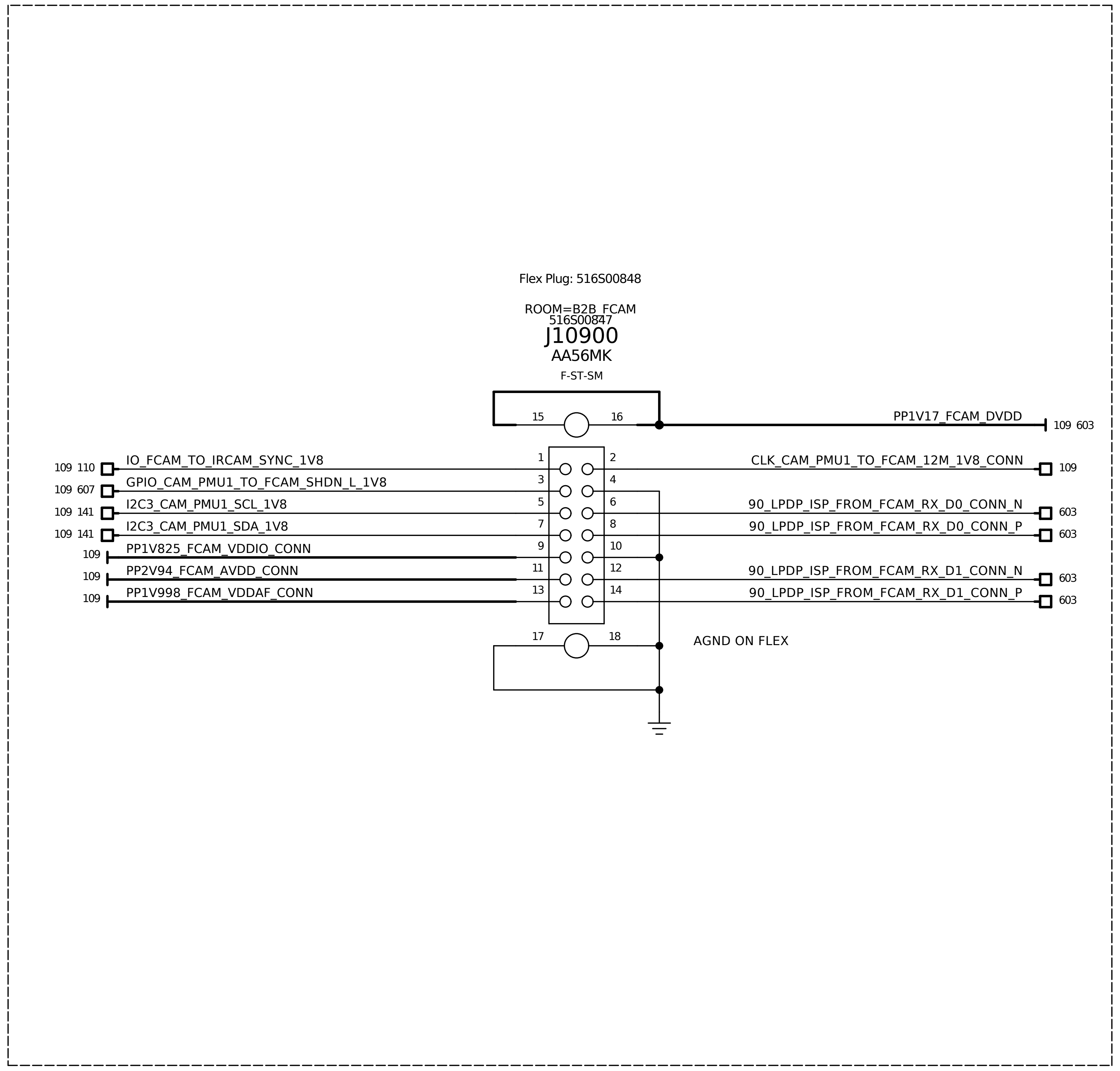
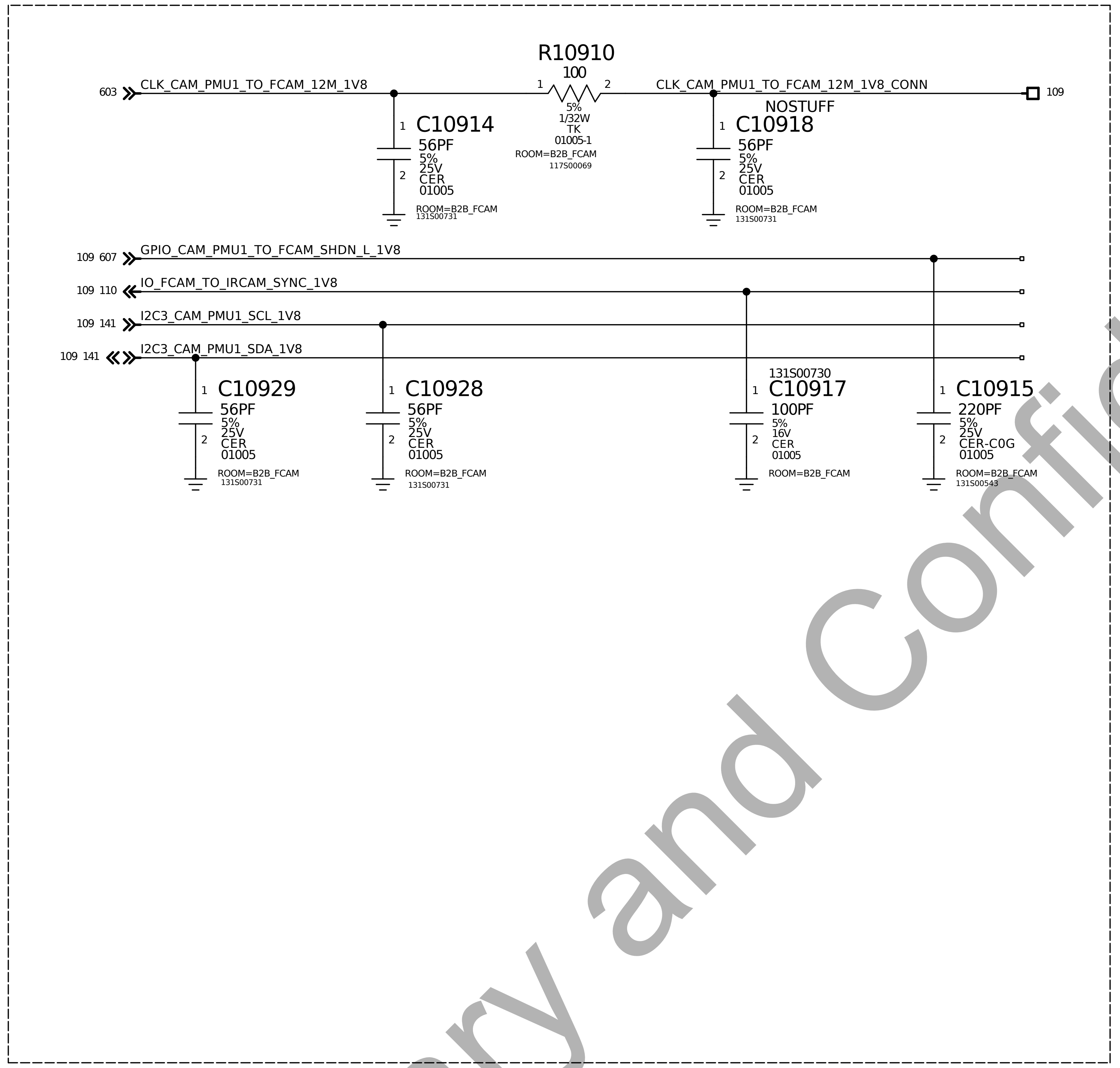
FCAM B2B

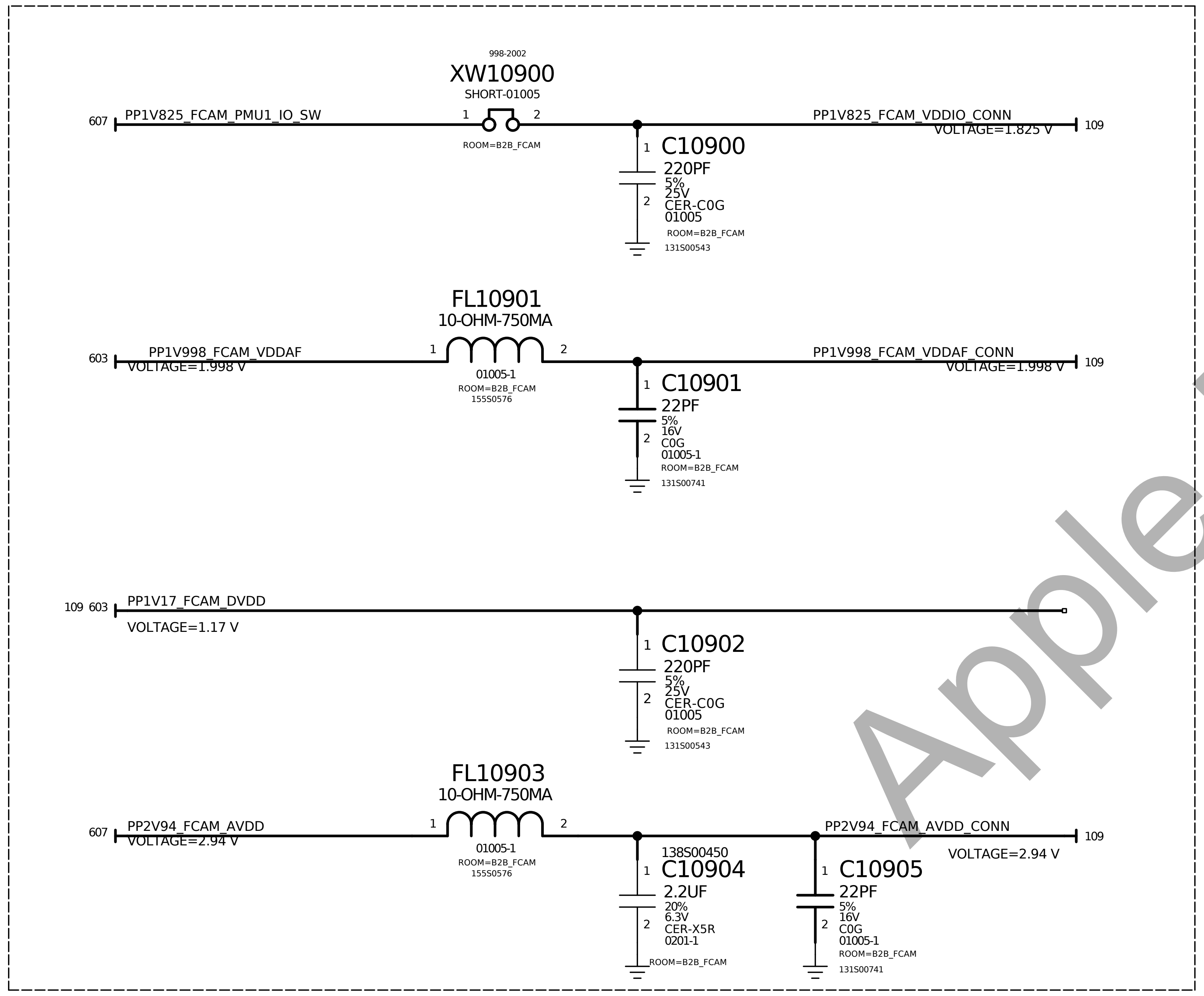
CONNECTORS


Flex Plug: 516S00848
ROOM=B2B_FCAM
516S00847
J10900
AA56MK
F-ST-SM
15
16
PP1V17_FCAM_DVDD
109 603
109 110
IO_FCAM_TO_IRCAM_SYNC_1V8
1
2
CLK_CAM_PMU1_TO_FCAM_12M_1V8_CONN
109
109 607
GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8
3
4
109 141
I2C3_CAM_PMU1_SCL_1V8
5
6
90_LPDP_ISP_FROM_FCAM_RX_D0_CONN_N
603
109 141
I2C3_CAM_PMU1_SDA_1V8
7
8
90_LPDP_ISP_FROM_FCAM_RX_D0_CONN_P
603
109
PP1V825_FCAM_VDDIO_CONN
9
10
109
PP2V94_FCAM_AVDD_CONN
11
12
90_LPDP_ISP_FROM_FCAM_RX_D1_CONN_N
603
109
PP1V998_FCAM_VDDAF_CONN
13
14
90_LPDP_ISP_FROM_FCAM_RX_D1_CONN_P
603
17
18
AGND ON FLEX

IO FILTERS


R10910
100
1
2
5%
1/32W
TK
01005-1
ROOM=B2B_FCAM
117S00069
603
CLK_CAM_PMU1_TO_FCAM_12M_1V8
CLK_CAM_PMU1_TO_FCAM_12M_1V8_CONN
109
C10914
56PF
5%
25V
CER
01005
ROOM=B2B_FCAM
131S00731
NOSTUFF
C10918
56PF
5%
25V
CER
01005
ROOM=B2B_FCAM
131S00731
109 607
GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8
109 110
IO_FCAM_TO_IRCAM_SYNC_1V8
109 141
I2C3_CAM_PMU1_SCL_1V8
109 141
I2C3_CAM_PMU1_SDA_1V8
C10929
56PF
5%
25V
CER
01005
ROOM=B2B_FCAM
131S00731
C10928
56PF
5%
25V
CER
01005
ROOM=B2B_FCAM
131S00731
131S00730
C10917
100PF
5%
16V
CER
01005
ROOM=B2B_FCAM
C10915
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_FCAM
131S00543

POWER FILTERS


998-2002
XW10900
SHORT-01005
ROOM=B2B_FCAM
607
PP1V825_FCAM_PMU1_IO_SW
PP1V825_FCAM_VDDIO_CONN
VOLTAGE=1.825 V
109
C10900
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_FCAM
131S00543
FL10901
10-OHM-750MA
01005-1
ROOM=B2B_FCAM
155S0576
603
PP1V998_FCAM_VDDAF
VOLTAGE=1.998 V
PP1V998_FCAM_VDDAF_CONN
VOLTAGE=1.998 V
109
C10901
22PF
5%
16V
C0G
01005-1
ROOM=B2B_FCAM
131S00741
109 603
PP1V17_FCAM_DVDD
VOLTAGE=1.17 V
C10902
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_FCAM
131S00543
FL10903
10-OHM-750MA
01005-1
ROOM=B2B_FCAM
155S0576
607
PP2V94_FCAM_AVDD
VOLTAGE=2.94 V
PP2V94_FCAM_AVDD_CONN
VOLTAGE=2.94 V
109
138S00450
C10904
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=B2B_FCAM
C10905
22PF
5%
16V
C0G
01005-1
ROOM=B2B_FCAM
131S00741

PAGE TITLE

B2B: FCAM (109)

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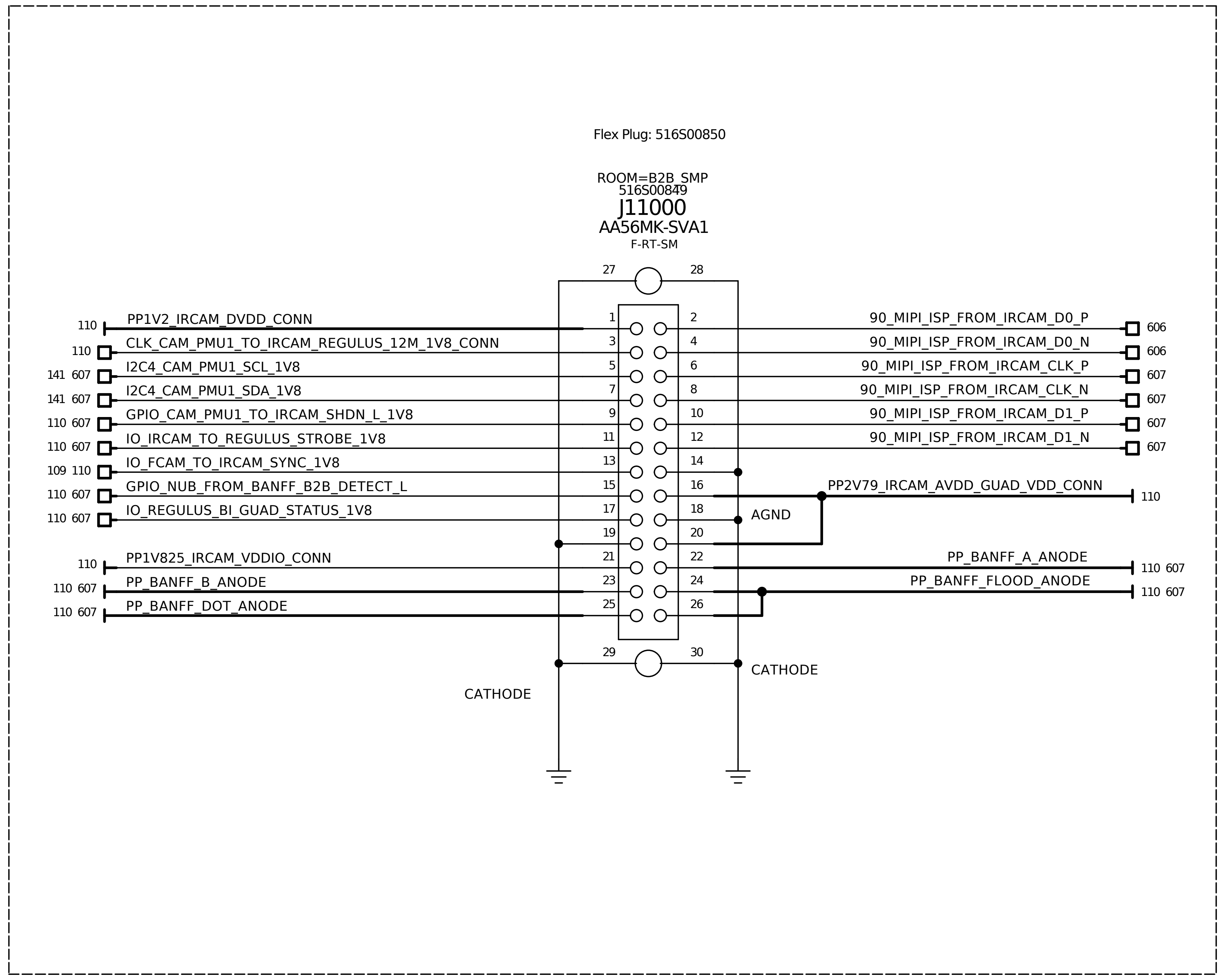
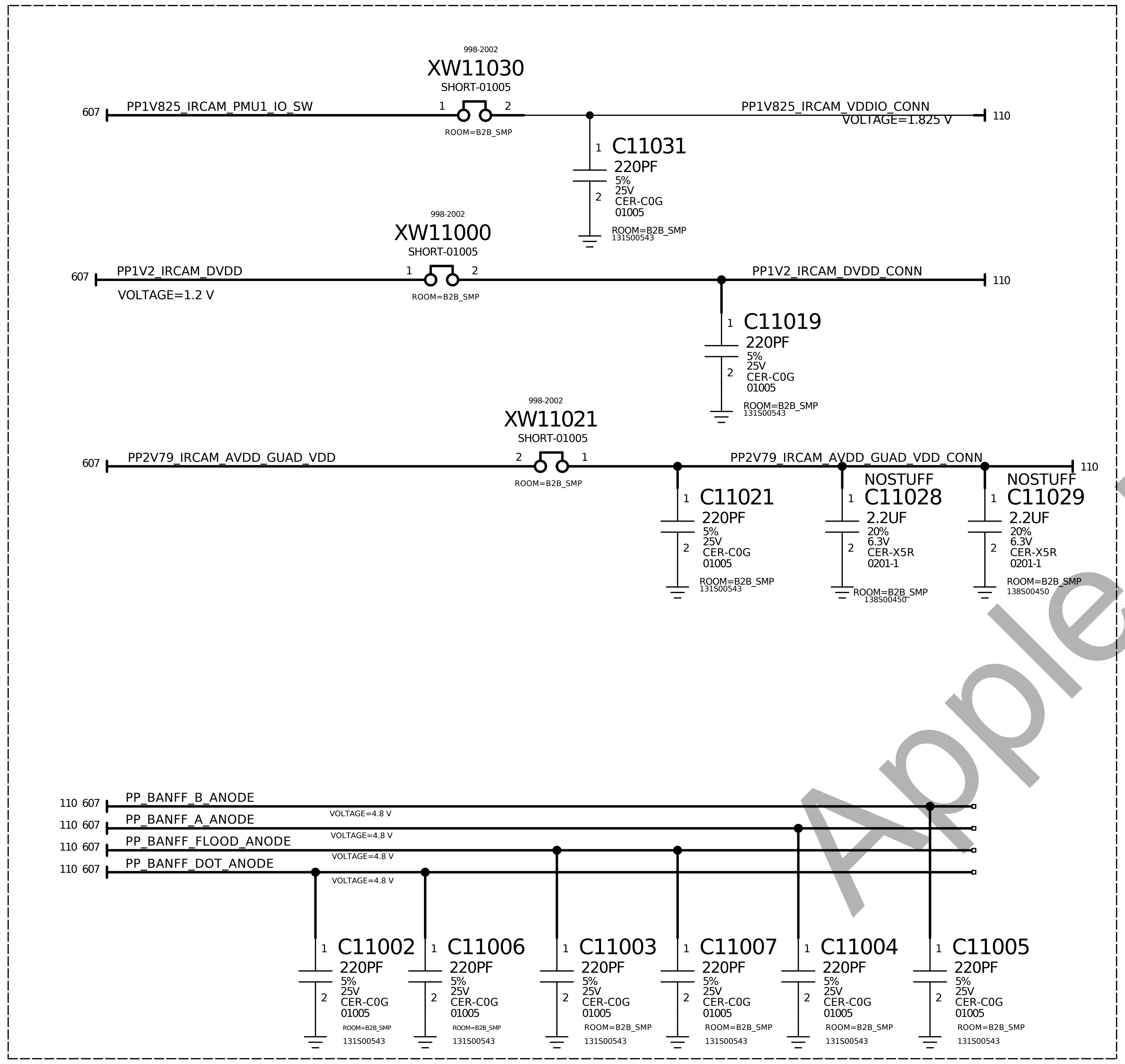
SMP B2B

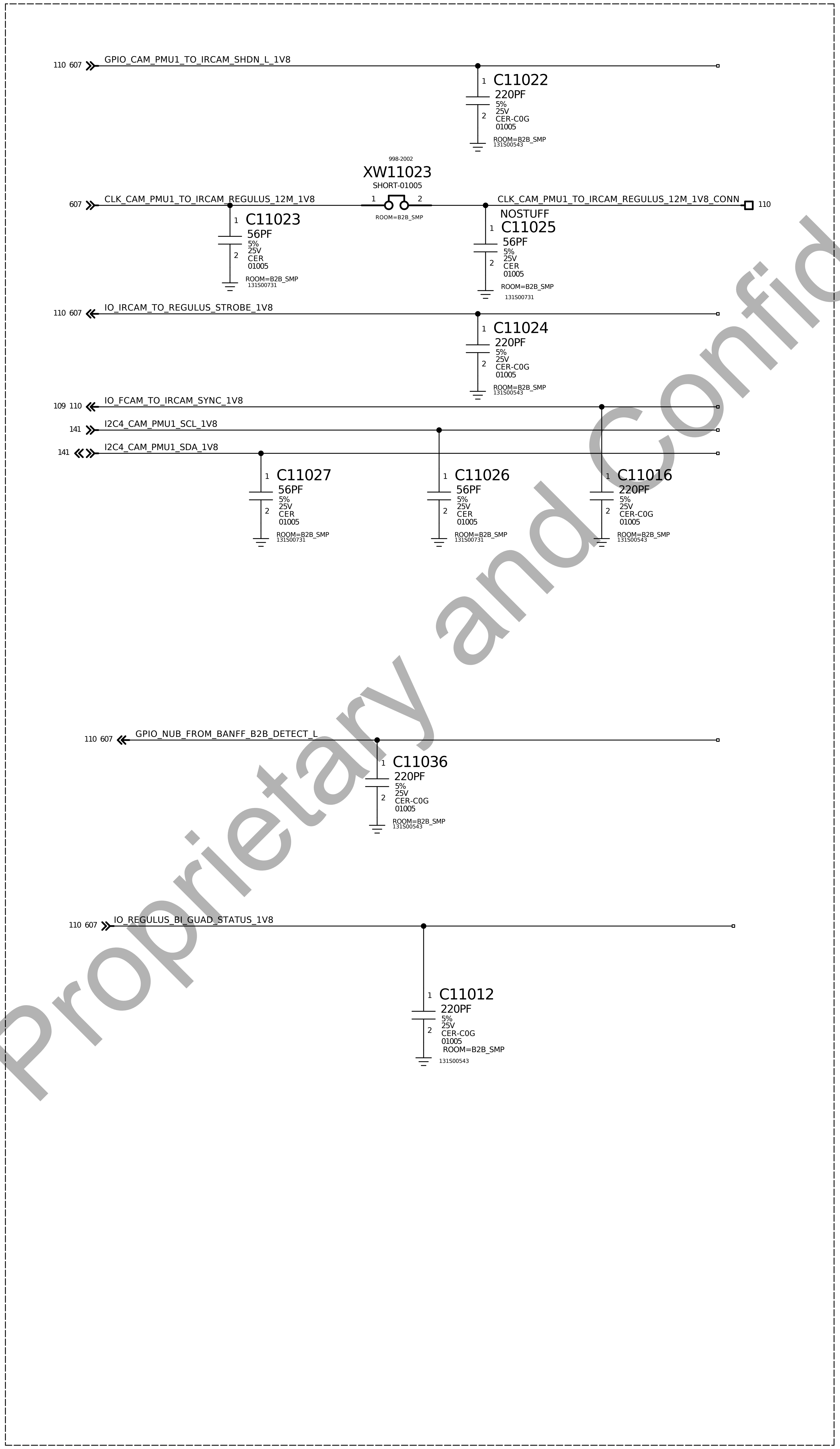
CONNECTOR


Flex Plug: 516S00850
ROOM=B2B_SMP
516S00849
J11000
AA56MK-SVA1
F-RT-SM
27
28
110 PP1V2_IRCAM_DVDD_CONN 1
110 CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8_CONN 3
141 607 I2C4_CAM_PMU1_SCL_1V8 5
141 607 I2C4_CAM_PMU1_SDA_1V8 7
110 607 GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8 9
110 607 IO_IRCAM_TO_REGULUS_STROBE_1V8 11
109 110 IO_FCAM_TO_IRCAM_SYNC_1V8 13
110 607 GPIO_NUB_FROM_BANFF_B2B_DETECT_L 15
110 607 IO_REGULUS_BI_GUAD_STATUS_1V8 17
19
110 PP1V825_IRCAM_VDDIO_CONN 21
110 607 PP_BANFF_B_ANODE 23
110 607 PP_BANFF_DOT_ANODE 25
2 90_MIPI_ISP_FROM_IRCAM_D0_P 606
4 90_MIPI_ISP_FROM_IRCAM_D0_N 606
6 90_MIPI_ISP_FROM_IRCAM_CLK_P 607
8 90_MIPI_ISP_FROM_IRCAM_CLK_N 607
10 90_MIPI_ISP_FROM_IRCAM_D1_P 607
12 90_MIPI_ISP_FROM_IRCAM_D1_N 607
14
16 PP2V79_IRCAM_AVDD_GUAD_VDD_CONN 110
18 AGND
20
22 PP_BANFF_A_ANODE 110 607
24 PP_BANFF_FLOOD_ANODE 110 607
26
29
30
CATHODE
CATHODE

POWER FILTERS


998-2002
XW11030
SHORT-01005
607 PP1V825_IRCAM_PMU1_IO_SW 1 2
ROOM=B2B_SMP
PP1V825_IRCAM_VDDIO_CONN 110
VOLTAGE=1.825 V
C11031
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_SMP
131S00543
998-2002
XW11000
SHORT-01005
607 PP1V2_IRCAM_DVDD 1 2
VOLTAGE=1.2 V
ROOM=B2B_SMP
PP1V2_IRCAM_DVDD_CONN 110
C11019
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_SMP
131S00543
998-2002
XW11021
SHORT-01005
607 PP2V79_IRCAM_AVDD_GUAD_VDD 2 1
ROOM=B2B_SMP
PP2V79_IRCAM_AVDD_GUAD_VDD_CONN 110
C11021
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_SMP
131S00543
NOSTUFF
C11028
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=B2B_SMP
138S00450
NOSTUFF
C11029
2.2UF
20%
6.3V
CER-X5R
0201-1
ROOM=B2B_SMP
138S00450
110 607 PP_BANFF_B_ANODE
110 607 PP_BANFF_A_ANODE VOLTAGE=4.8 V
110 607 PP_BANFF_FLOOD_ANODE VOLTAGE=4.8 V
110 607 PP_BANFF_DOT_ANODE VOLTAGE=4.8 V
VOLTAGE=4.8 V
C11002 220PF 5% 25V CER-C0G 01005 ROOM=B2B_SMP 131S00543
C11006 220PF 5% 25V CER-C0G 01005 ROOM=B2B_SMP 131S00543
C11003 220PF 5% 25V CER-C0G 01005 ROOM=B2B_SMP 131S00543
C11007 220PF 5% 25V CER-C0G 01005 ROOM=B2B_SMP 131S00543
C11004 220PF 5% 25V CER-C0G 01005 ROOM=B2B_SMP 131S00543
C11005 220PF 5% 25V CER-C0G 01005 ROOM=B2B_SMP 131S00543

IO FILTERS


110 607 GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8
C11022
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_SMP
131S00543
998-2002
XW11023
SHORT-01005
607 CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8 1 2
ROOM=B2B_SMP
CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8_CONN 110
C11023
56PF
5%
25V
CER
01005
ROOM=B2B_SMP
131S00731
NOSTUFF
C11025
56PF
5%
25V
CER
01005
ROOM=B2B_SMP
131S00731
110 607 IO_IRCAM_TO_REGULUS_STROBE_1V8
C11024
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_SMP
131S00543
109 110 IO_FCAM_TO_IRCAM_SYNC_1V8
141 I2C4_CAM_PMU1_SCL_1V8
141 I2C4_CAM_PMU1_SDA_1V8
C11027 56PF 5% 25V CER 01005 ROOM=B2B_SMP 131S00731
C11026 56PF 5% 25V CER 01005 ROOM=B2B_SMP 131S00731
C11016 220PF 5% 25V CER-C0G 01005 ROOM=B2B_SMP 131S00543
110 607 GPIO_NUB_FROM_BANFF_B2B_DETECT_L
C11036
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_SMP
131S00543
110 607 IO_REGULUS_BI_GUAD_STATUS_1V8
C11012
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_SMP
131S00543

PAGE TITLE

B2B: SMP (110)

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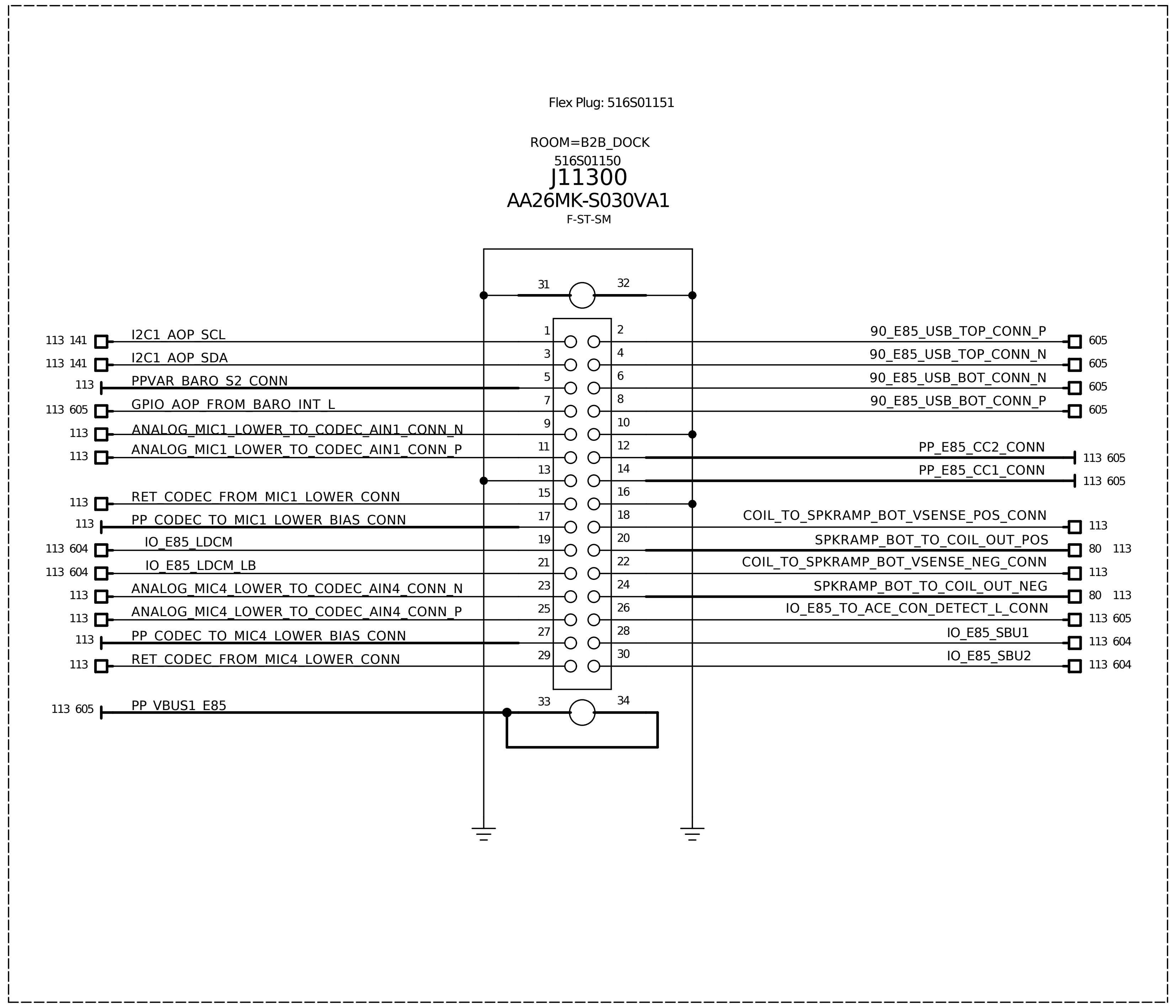
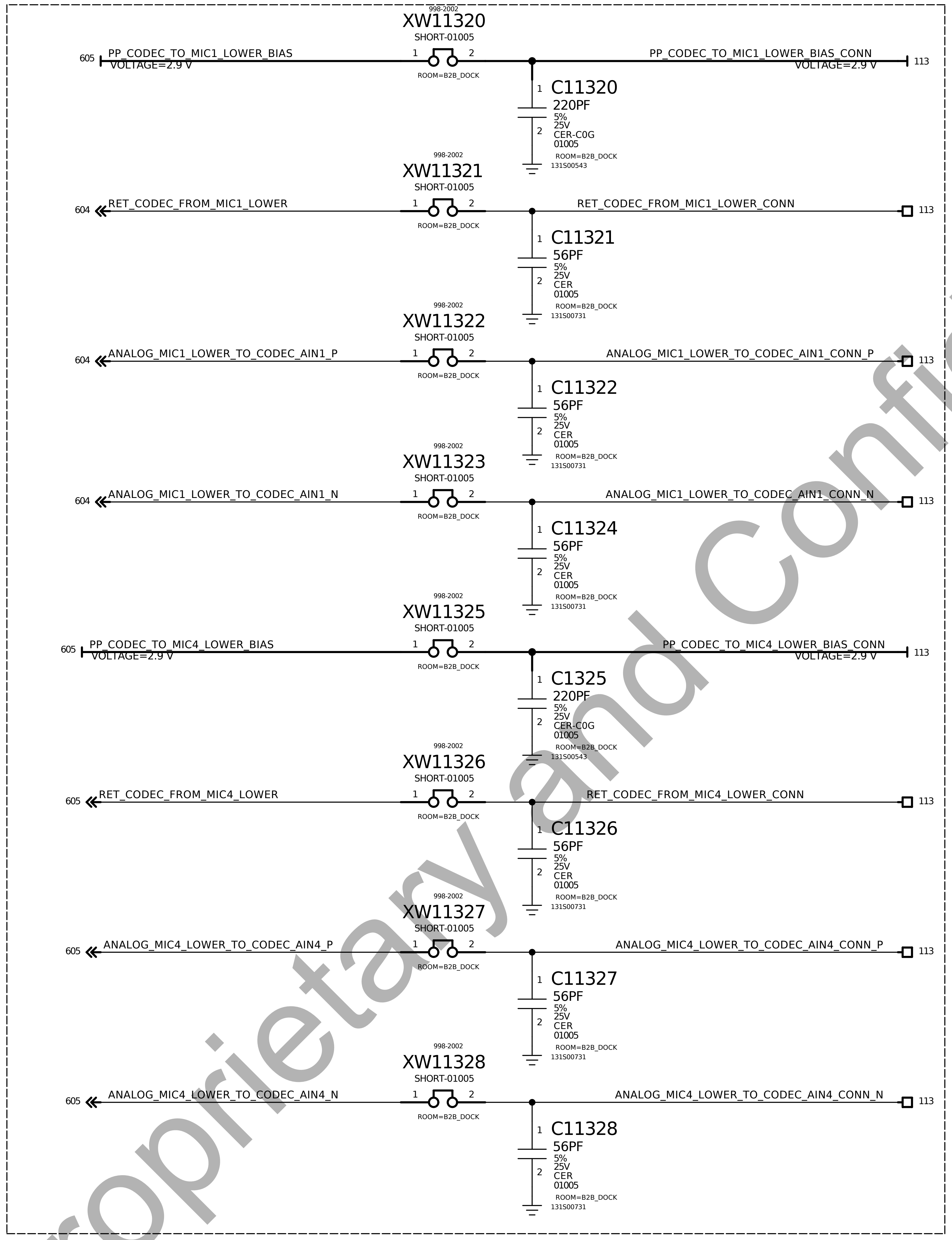
DOCK B2B

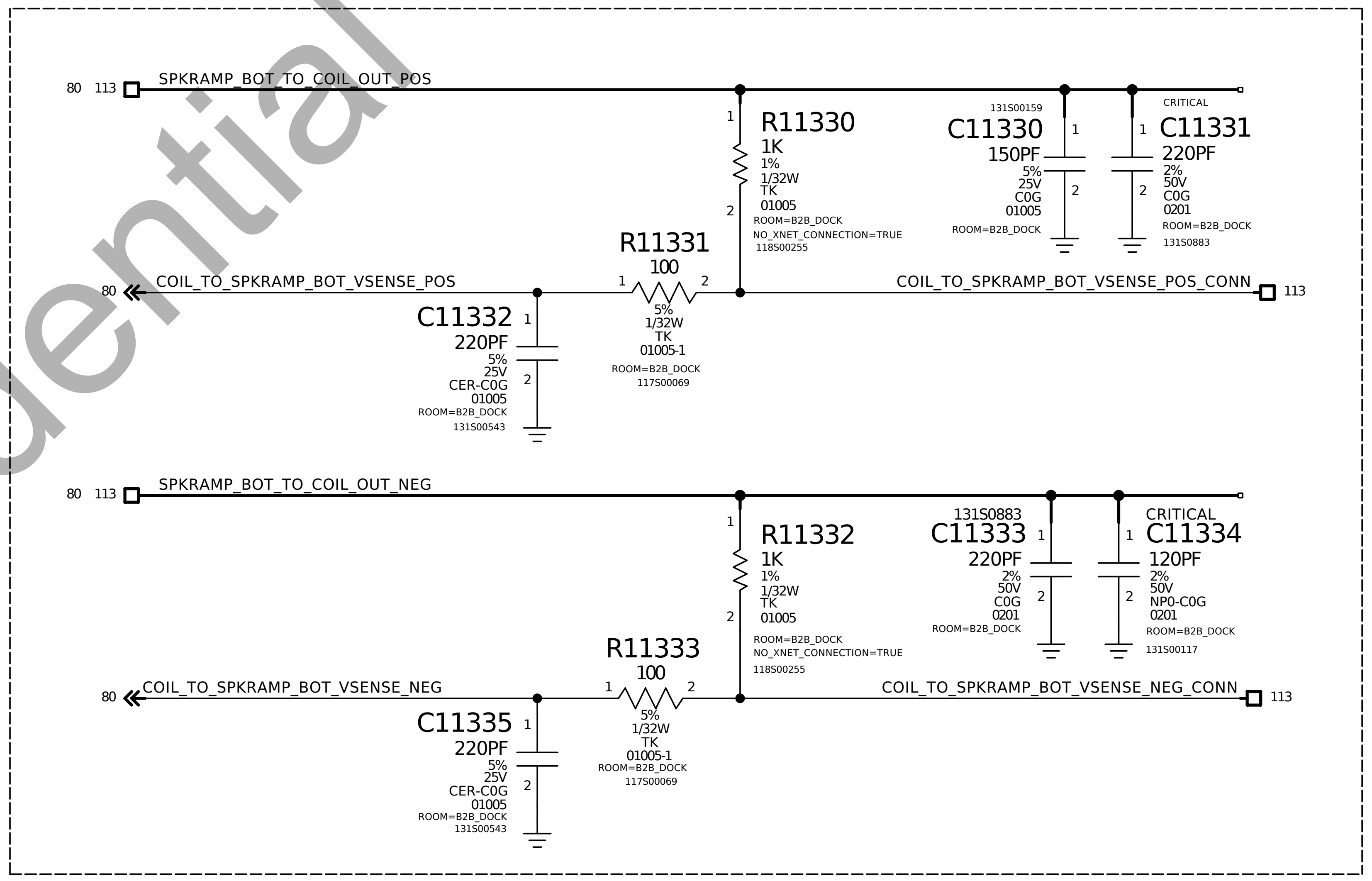
CONNECTOR


Flex Plug: 516S01151
ROOM=B2B_DOCK
516S01150
J11300
AA26MK-S030VA1
F-ST-SM
I2C1_AOP_SCL
I2C1_AOP_SDA
PPVAR_BARO_S2_CONN
GPIO_AOP_FROM_BARO_INT_L
ANALOG_MIC1_LOWER_TO_CODEC_AIN1_CONN_N
ANALOG_MIC1_LOWER_TO_CODEC_AIN1_CONN_P
RET_CODEC_FROM_MIC1_LOWER_CONN
PP_CODEC_TO_MIC1_LOWER_BIAS_CONN
IO_E85_LDCM
IO_E85_LDCM_LB
ANALOG_MIC4_LOWER_TO_CODEC_AIN4_CONN_N
ANALOG_MIC4_LOWER_TO_CODEC_AIN4_CONN_P
PP_CODEC_TO_MIC4_LOWER_BIAS_CONN
RET_CODEC_FROM_MIC4_LOWER_CONN
PP_VBUS1_E85
90_E85_USB_TOP_CONN_P
90_E85_USB_TOP_CONN_N
90_E85_USB_BOT_CONN_N
90_E85_USB_BOT_CONN_P
PP_E85_CC2_CONN
PP_E85_CC1_CONN
COIL_TO_SPKRAMP_BOT_VSENSE_POS_CONN
SPKRAMP_BOT_TO_COIL_OUT_POS
COIL_TO_SPKRAMP_BOT_VSENSE_NEG_CONN
SPKRAMP_BOT_TO_COIL_OUT_NEG
IO_E85_TO_ACE_CON_DETECT_L_CONN
IO_E85_SBU1
IO_E85_SBU2

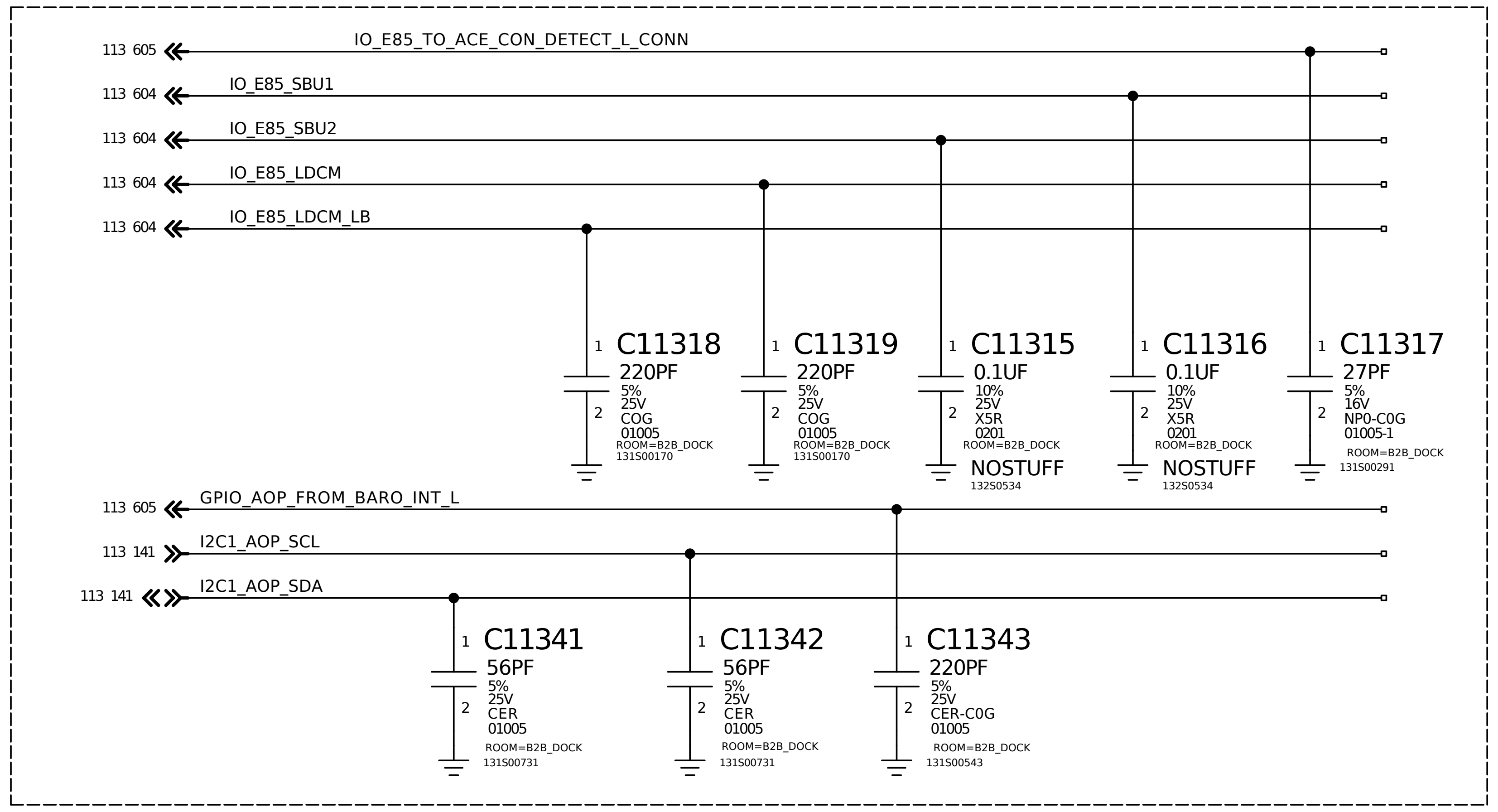
MIC1 + MIC4


XW11320
XW11321
XW11322
XW11323
XW11325
XW11326
XW11327
XW11328
SHORT-01005
PP_CODEC_TO_MIC1_LOWER_BIAS
VOLTAGE=2.9 V
PP_CODEC_TO_MIC1_LOWER_BIAS_CONN
RET_CODEC_FROM_MIC1_LOWER
RET_CODEC_FROM_MIC1_LOWER_CONN
ANALOG_MIC1_LOWER_TO_CODEC_AIN1_P
ANALOG_MIC1_LOWER_TO_CODEC_AIN1_CONN_P
ANALOG_MIC1_LOWER_TO_CODEC_AIN1_N
ANALOG_MIC1_LOWER_TO_CODEC_AIN1_CONN_N
PP_CODEC_TO_MIC4_LOWER_BIAS
PP_CODEC_TO_MIC4_LOWER_BIAS_CONN
RET_CODEC_FROM_MIC4_LOWER
RET_CODEC_FROM_MIC4_LOWER_CONN
ANALOG_MIC4_LOWER_TO_CODEC_AIN4_P
ANALOG_MIC4_LOWER_TO_CODEC_AIN4_CONN_P
ANALOG_MIC4_LOWER_TO_CODEC_AIN4_N
ANALOG_MIC4_LOWER_TO_CODEC_AIN4_CONN_N
C11320 220PF
C11321 56PF
C11322 56PF
C11324 56PF
C1325 220PF
C11326 56PF
C11327 56PF
C11328 56PF

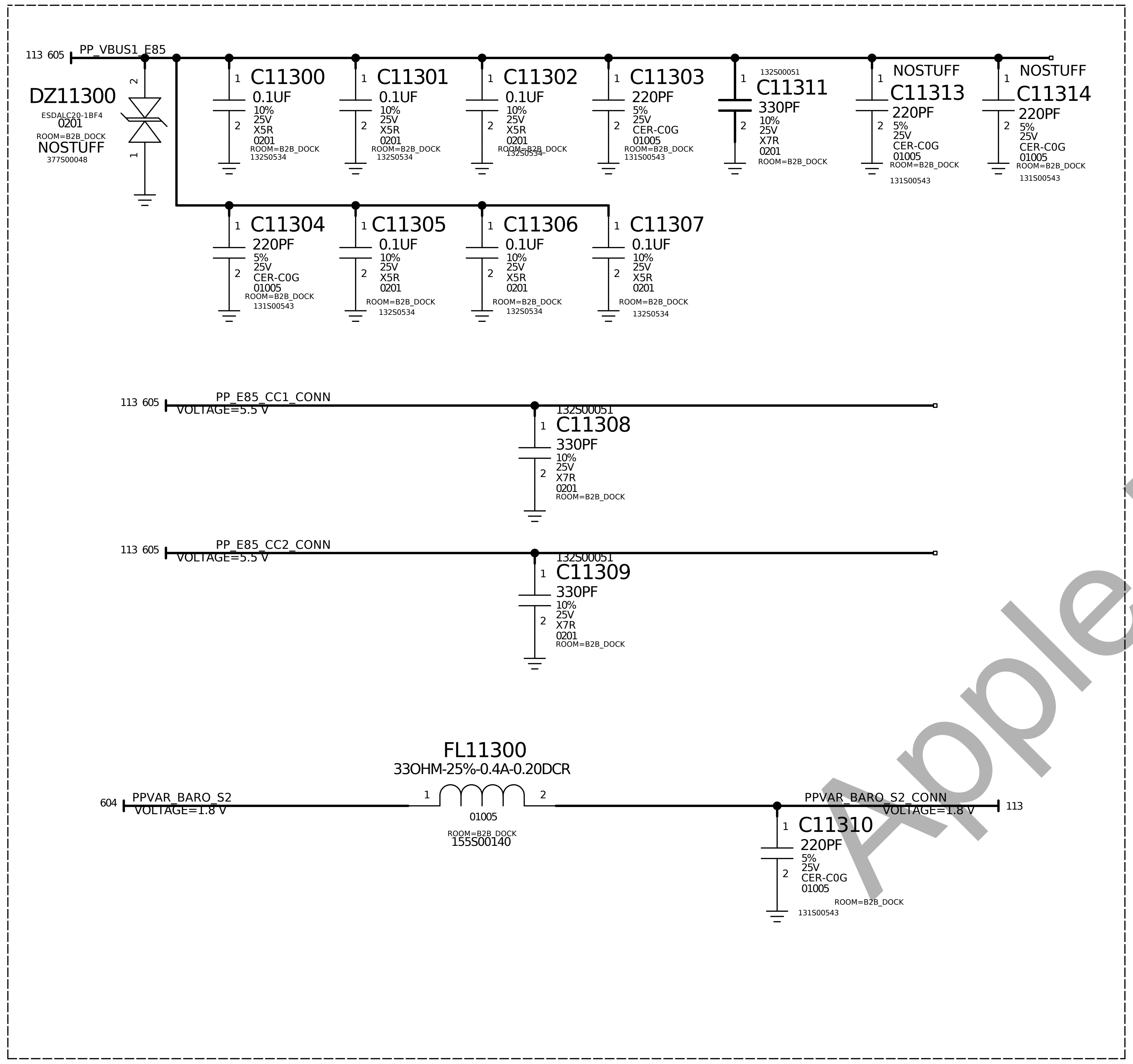
BOT SPEAKER


SPKRAMP_BOT_TO_COIL_OUT_POS
R11330 1K
C11330 150PF
CRITICAL
C11331 220PF
R11331 100
COIL_TO_SPKRAMP_BOT_VSENSE_POS
COIL_TO_SPKRAMP_BOT_VSENSE_POS_CONN
C11332 220PF
SPKRAMP_BOT_TO_COIL_OUT_NEG
R11332 1K
C11333 220PF
C11334 120PF
R11333 100
COIL_TO_SPKRAMP_BOT_VSENSE_NEG
COIL_TO_SPKRAMP_BOT_VSENSE_NEG_CONN
C11335 220PF

IO FILTERS


IO_E85_TO_ACE_CON_DETECT_L_CONN
IO_E85_SBU1
IO_E85_SBU2
IO_E85_LDCM
IO_E85_LDCM_LB
C11318 220PF
C11319 220PF
C11315 0.1UF
C11316 0.1UF
C11317 27PF
NOSTUFF
GPIO_AOP_FROM_BARO_INT_L
I2C1_AOP_SCL
I2C1_AOP_SDA
C11341 56PF
C11342 56PF
C11343 220PF

POWER FILTERS


PP_VBUS1_E85
DZ11300
NOSTUFF
C11300 0.1UF
C11301 0.1UF
C11302 0.1UF
C11303 220PF
C11311 330PF
C11313 220PF
C11314 220PF
C11304 220PF
C11305 0.1UF
C11306 0.1UF
C11307 0.1UF
PP_E85_CC1_CONN
VOLTAGE=5.5 V
C11308 330PF
PP_E85_CC2_CONN
C11309 330PF
FL11300
33OHM-25%-0.4A-0.20DCR
PPVAR_BARO_S2
VOLTAGE=1.8 V
PPVAR_BARO_S2_CONN
C11310 220PF

PAGE TITLE

B2B: Dock (113)

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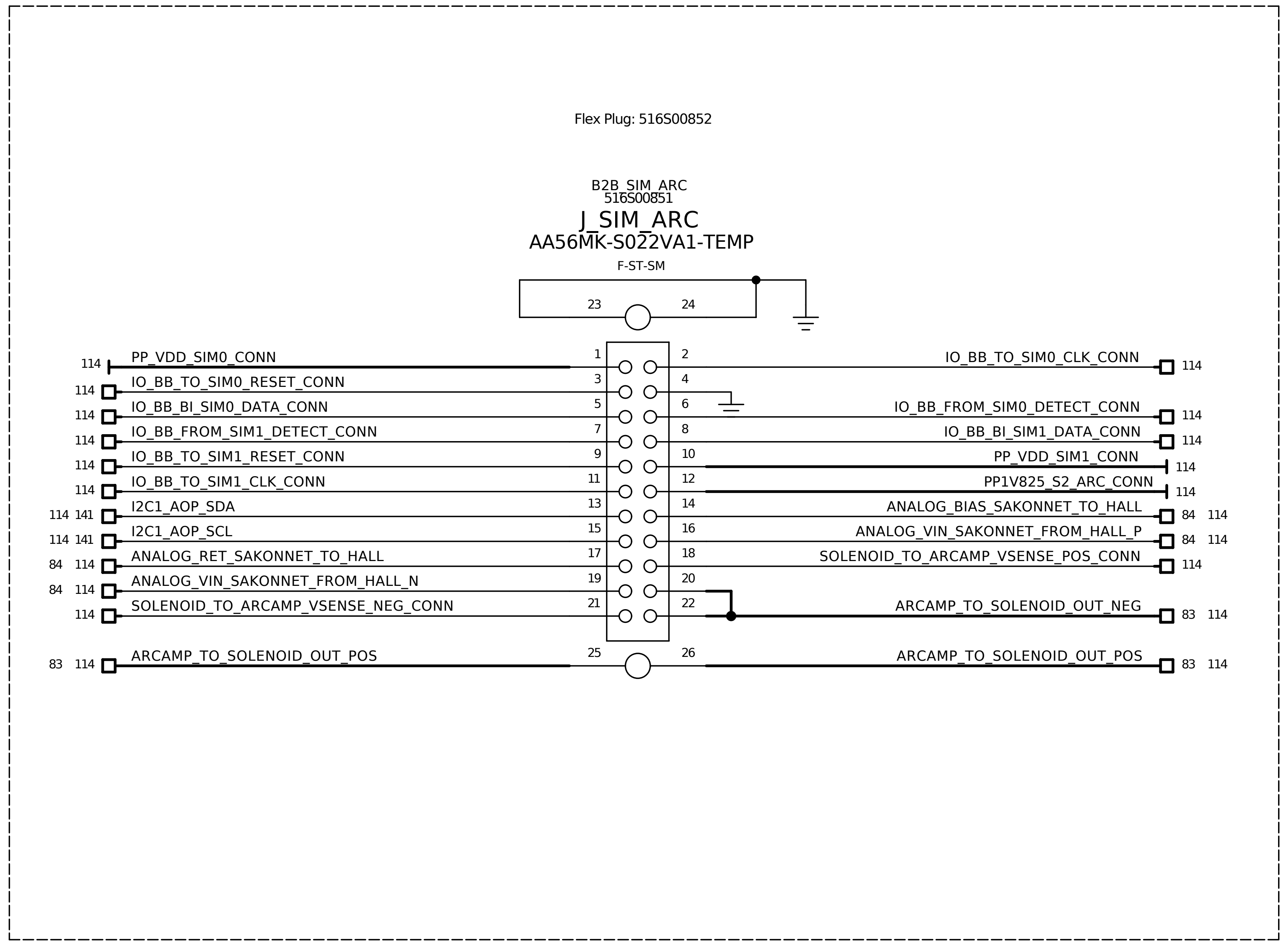
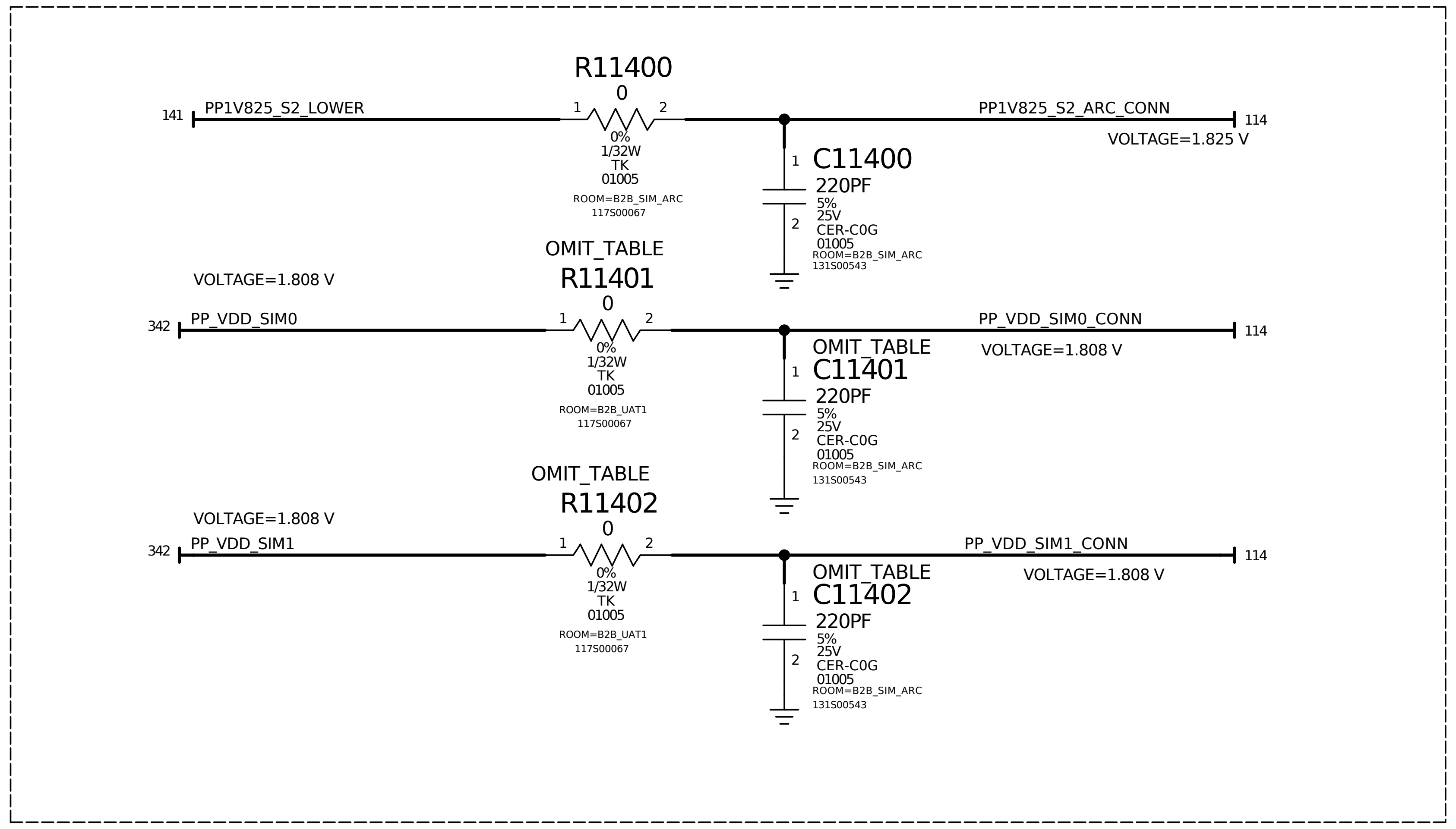
SIM ARC B2B

CONNECTOR



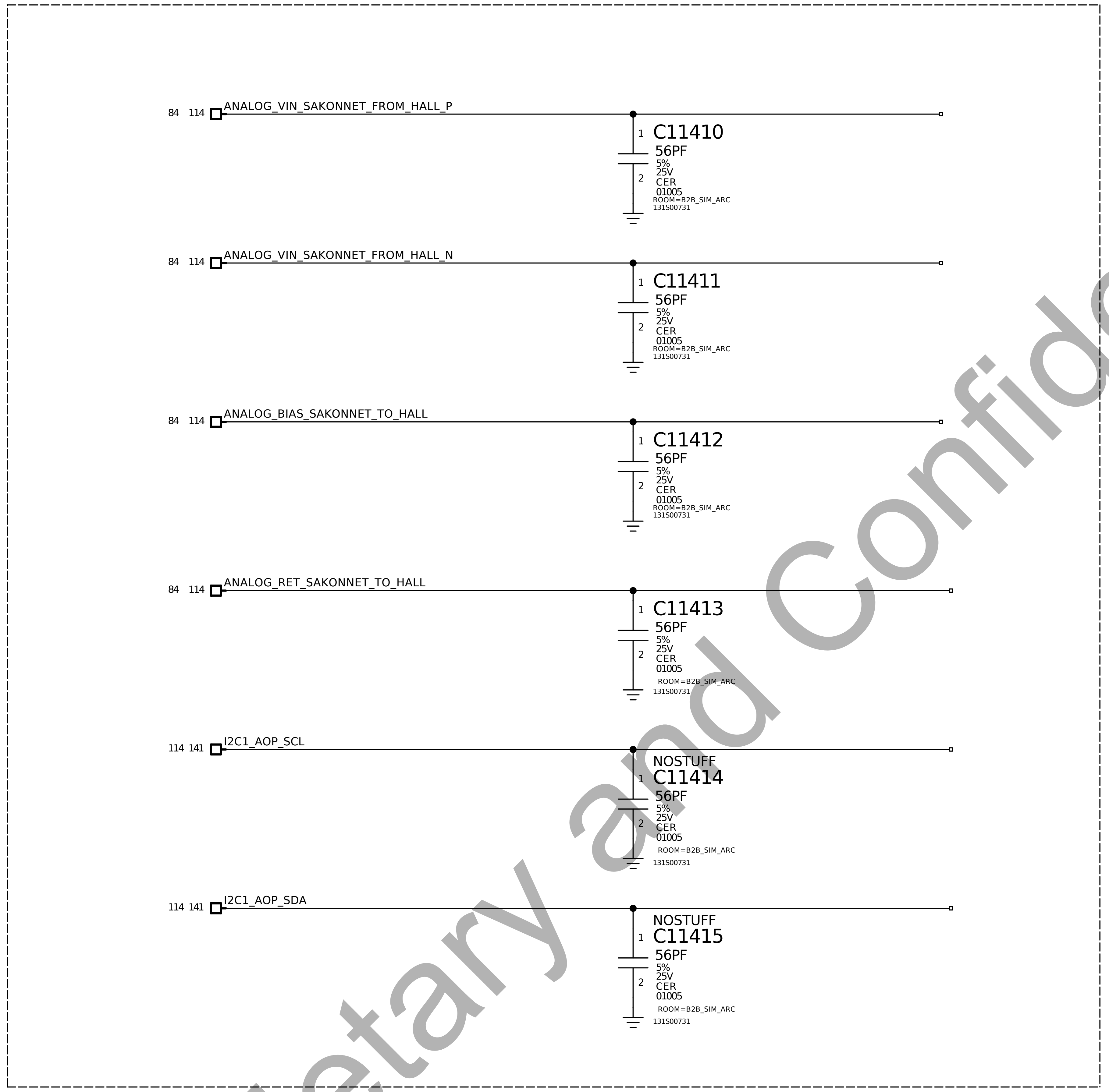
Flex Plug: 516S00852
B2B_SIM_ARC
516S00851
J_SIM_ARC
AA56MK-S022VA1-TEMP
F-ST-SM
PP_VDD_SIM0_CONN
IO_BB_TO_SIM0_RESET_CONN
IO_BB_BI_SIM0_DATA_CONN
IO_BB_FROM_SIM1_DETECT_CONN
IO_BB_TO_SIM1_RESET_CONN
IO_BB_TO_SIM1_CLK_CONN
I2C1_AOP_SDA
I2C1_AOP_SCL
ANALOG_RET_SAKONNET_TO_HALL
ANALOG_VIN_SAKONNET_FROM_HALL_N
SOLENOID_TO_ARCAMP_VSENSE_NEG_CONN
ARCAMP_TO_SOLENOID_OUT_POS
IO_BB_TO_SIM0_CLK_CONN
IO_BB_FROM_SIM0_DETECT_CONN
IO_BB_BI_SIM1_DATA_CONN
PP_VDD_SIM1_CONN
PP1V825_S2_ARC_CONN
ANALOG_BIAS_SAKONNET_TO_HALL
ANALOG_VIN_SAKONNET_FROM_HALL_P
SOLENOID_TO_ARCAMP_VSENSE_POS_CONN
ARCAMP_TO_SOLENOID_OUT_NEG
ARCAMP_TO_SOLENOID_OUT_POS

POWER FILTERS



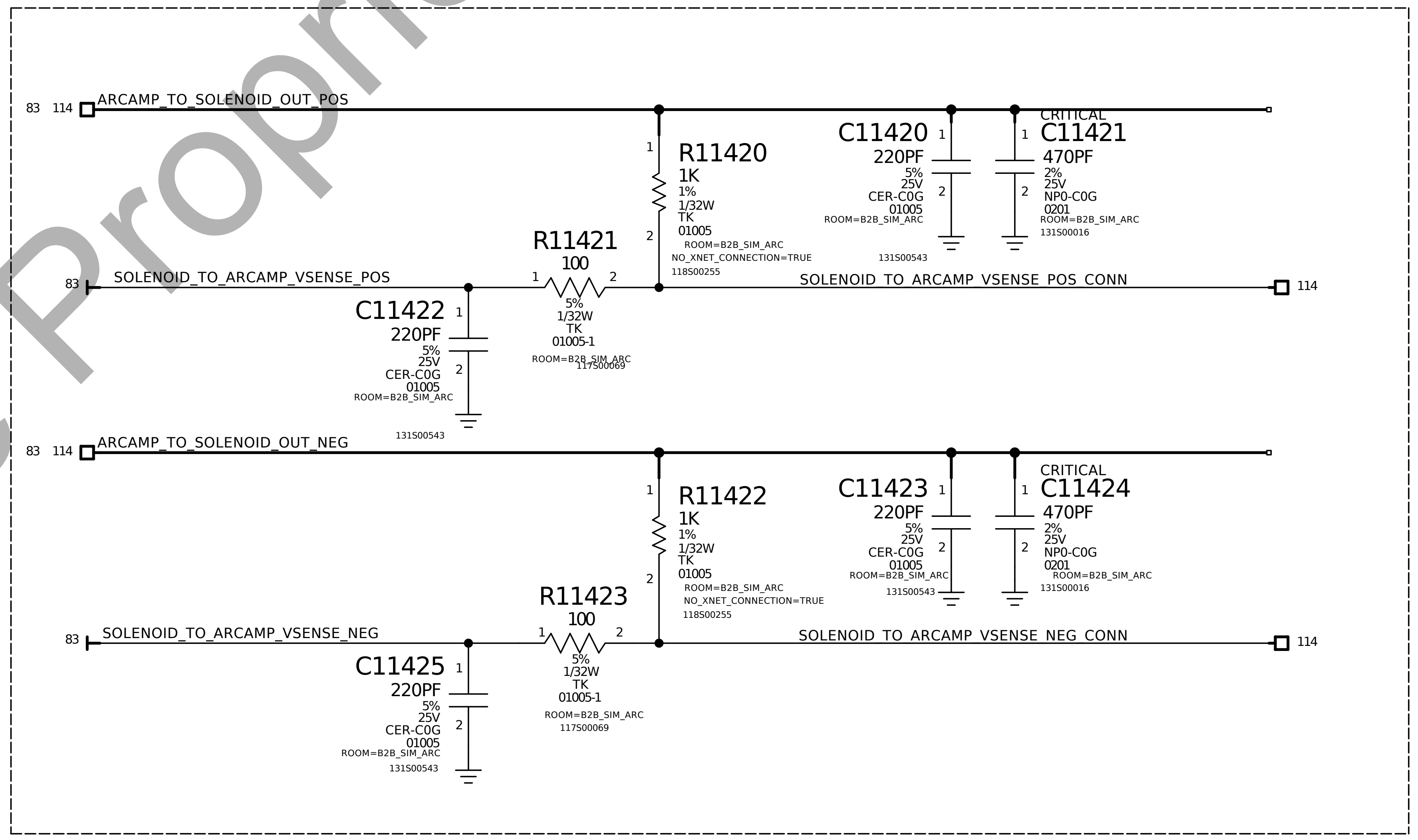
R11400
0
PP1V825_S2_LOWER
PP1V825_S2_ARC_CONN
VOLTAGE=1.825 V
C11400
220PF
OMIT_TABLE
R11401
0
VOLTAGE=1.808 V
PP_VDD_SIM0
PP_VDD_SIM0_CONN
OMIT_TABLE
C11401
220PF
OMIT_TABLE
R11402
0
PP_VDD_SIM1
PP_VDD_SIM1_CONN
OMIT_TABLE
C11402
220PF

ARC IO FILTERS



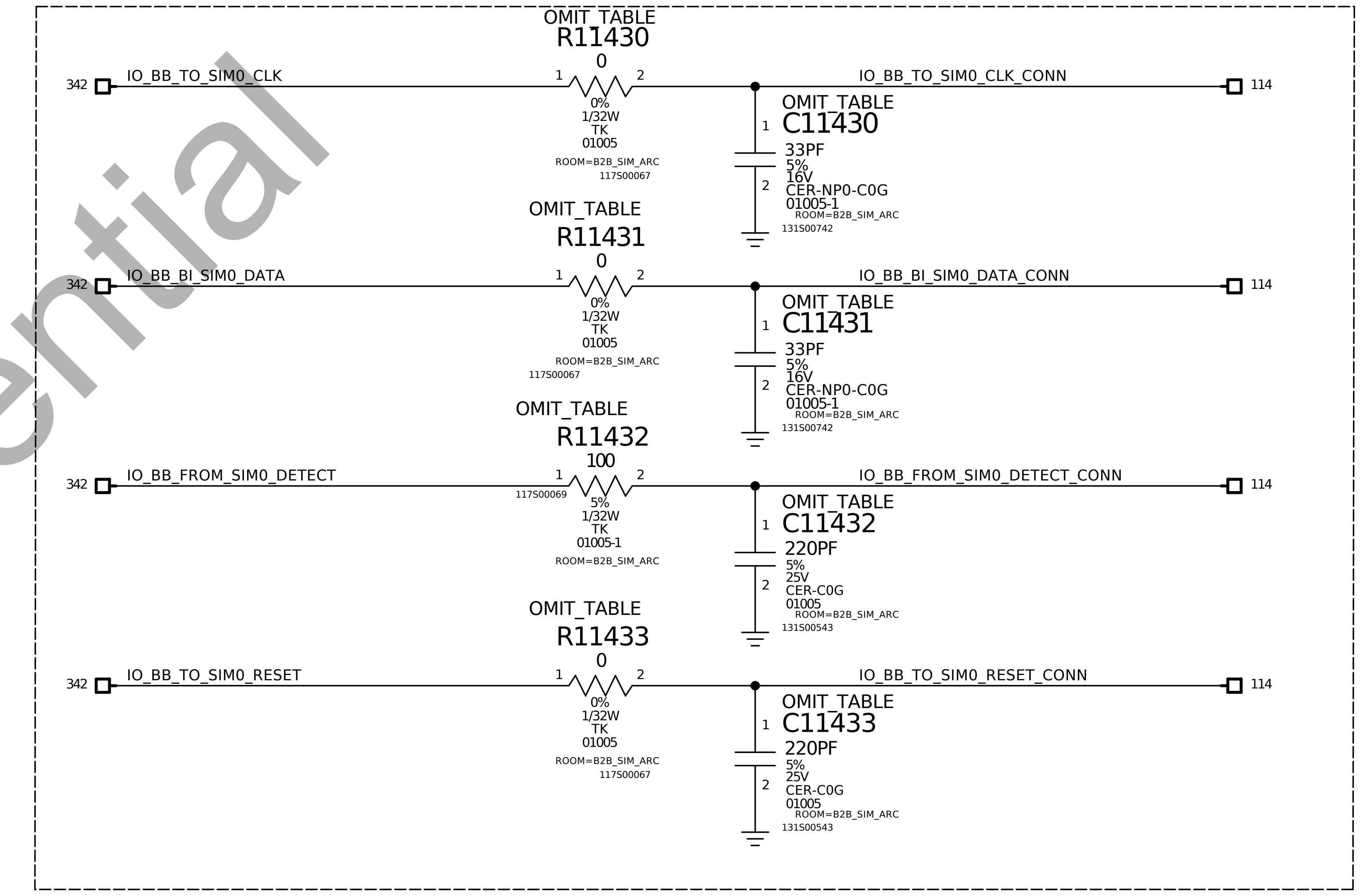
ANALOG_VIN_SAKONNET_FROM_HALL_P
C11410
56PF
ANALOG_VIN_SAKONNET_FROM_HALL_N
C11411
56PF
ANALOG_BIAS_SAKONNET_TO_HALL
C11412
56PF
ANALOG_RET_SAKONNET_TO_HALL
C11413
56PF
I2C1_AOP_SCL
NOSTUFF
C11414
56PF
I2C1_AOP_SDA
NOSTUFF
C11415
56PF

ARC SPEAKER



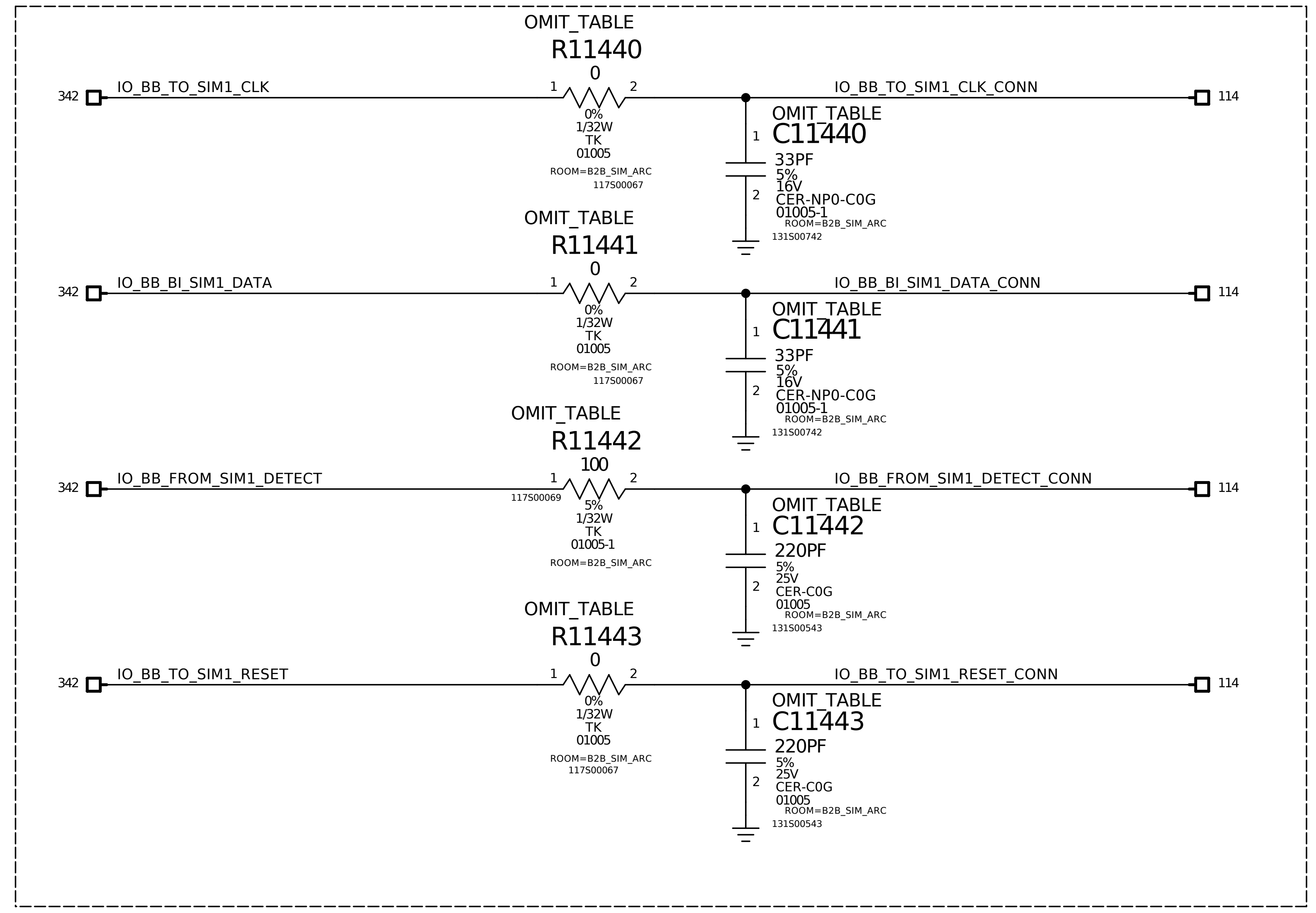
ARCAMP_TO_SOLENOID_OUT_POS
R11420
1K
C11420
220PF
CRITICAL
C11421
470PF
SOLENOID_TO_ARCAMP_VSENSE_POS
R11421
100
C11422
220PF
SOLENOID_TO_ARCAMP_VSENSE_POS_CONN
ARCAMP_TO_SOLENOID_OUT_NEG
R11422
1K
C11423
220PF
CRITICAL
C11424
470PF
SOLENOID_TO_ARCAMP_VSENSE_NEG
R11423
100
C11425
220PF
SOLENOID_TO_ARCAMP_VSENSE_NEG_CONN

SIM0 IO FILTERS



OMIT_TABLE
R11430
0
IO_BB_TO_SIM0_CLK
IO_BB_TO_SIM0_CLK_CONN
C11430
33PF
R11431
IO_BB_BI_SIM0_DATA
IO_BB_BI_SIM0_DATA_CONN
C11431
33PF
R11432
100
IO_BB_FROM_SIM0_DETECT
IO_BB_FROM_SIM0_DETECT_CONN
C11432
220PF
R11433
IO_BB_TO_SIM0_RESET
IO_BB_TO_SIM0_RESET_CONN
C11433
220PF

SIM1 IO FILTERS



OMIT_TABLE
R11440
0
IO_BB_TO_SIM1_CLK
IO_BB_TO_SIM1_CLK_CONN
C11440
33PF
R11441
IO_BB_BI_SIM1_DATA
IO_BB_BI_SIM1_DATA_CONN
C11441
33PF
R11442
100
IO_BB_FROM_SIM1_DETECT
IO_BB_FROM_SIM1_DETECT_CONN
C11442
220PF
R11443
IO_BB_TO_SIM1_RESET
IO_BB_TO_SIM1_RESET_CONN
C11443
220PF

SIM Bus/Power Stuffing Options:

For mmW, Ground flex connections and nostuff series R

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	QTY	DESCRIPTION
117S00067	RFSKU:US	C11401,C11402,C11430-C11433,C11440-C11443	10	RES,TK,0 OHM,1/32W,01005
117S00067	RFSKU:RS||RFSKU:ROW	C11402,C11440-C11443,R11401,R11430,R11431,R11433	9	RES,TK,0 OHM,1/32W,01005
131S00543	RFSKU:RS||RFSKU:ROW	C11401,C11432,C11433	3	CAP,CER,C0G,220PF,5%,25V,01005
117S00069	RFSKU:RS||RFSKU:ROW	R11432	1	RES,TK,100 OHM,5%,1/32W,01005
131S00742	RFSKU:RS||RFSKU:ROW	C11430,C11431	2	CAP,CER,NP0/C0G,33PF,5%,16V,01005
117S00067	RFSKU:CHN	R11401,R11402,R11430,R11431,R11433,R11440,R11441,R11443	8	RES,TK,0 OHM,1/32W,01005
131S00543	RFSKU:CHN	C11401,C11402,C11432,C11433,C11442,C11443	6	CAP,CER,C0G,220PF,5%,25V,01005
131S00742	RFSKU:CHN	C11430,C11431,C11440,C11441	4	CAP,CER,NP0/C0G,33PF,5%,16V,01005
117S00069	RFSKU:CHN	R11432,R11442	2	RES,TK,100 OHM,5%,1/32W,01005

PAGE TITLE

B2B: SIM + Arc (114)

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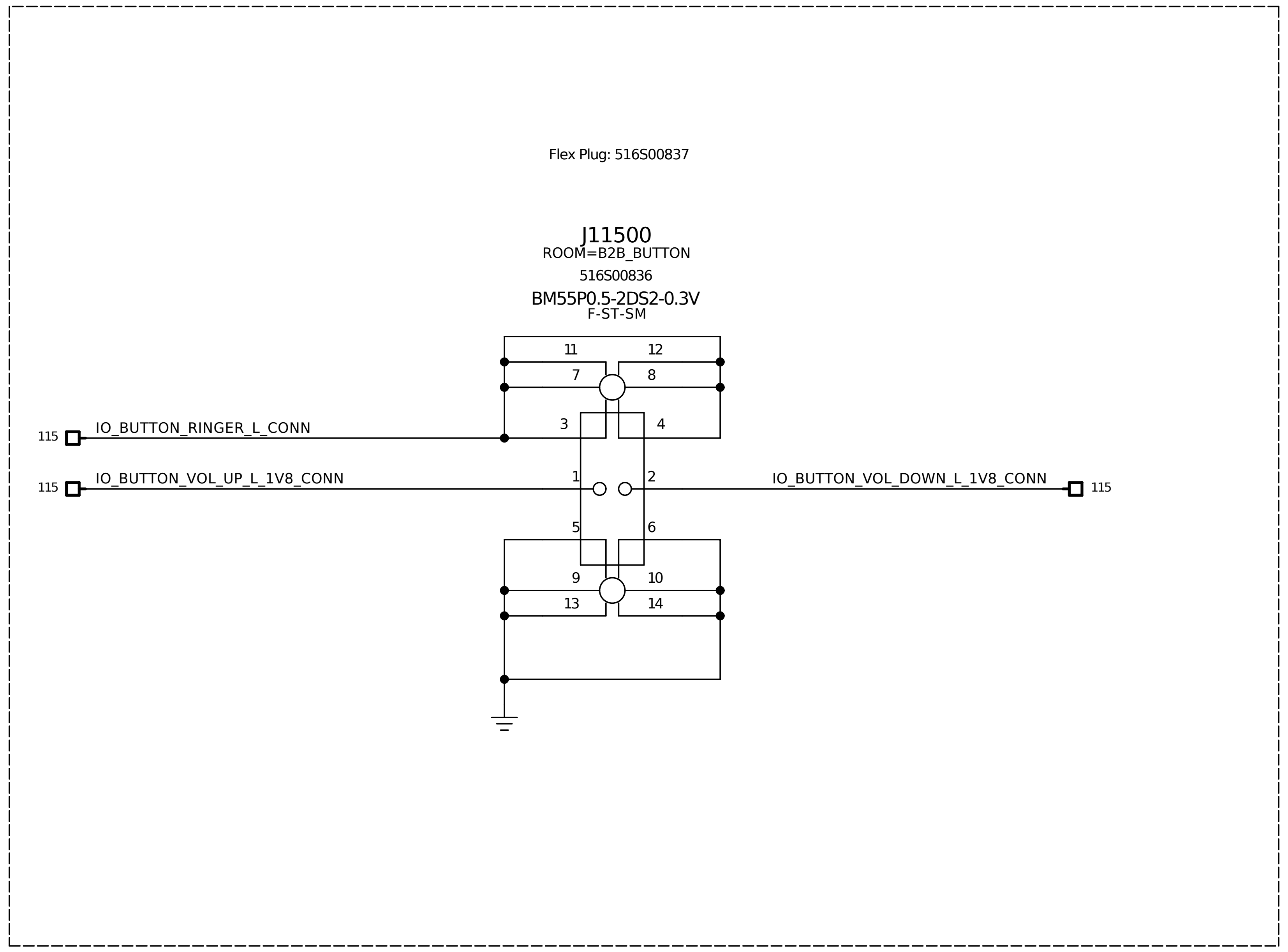
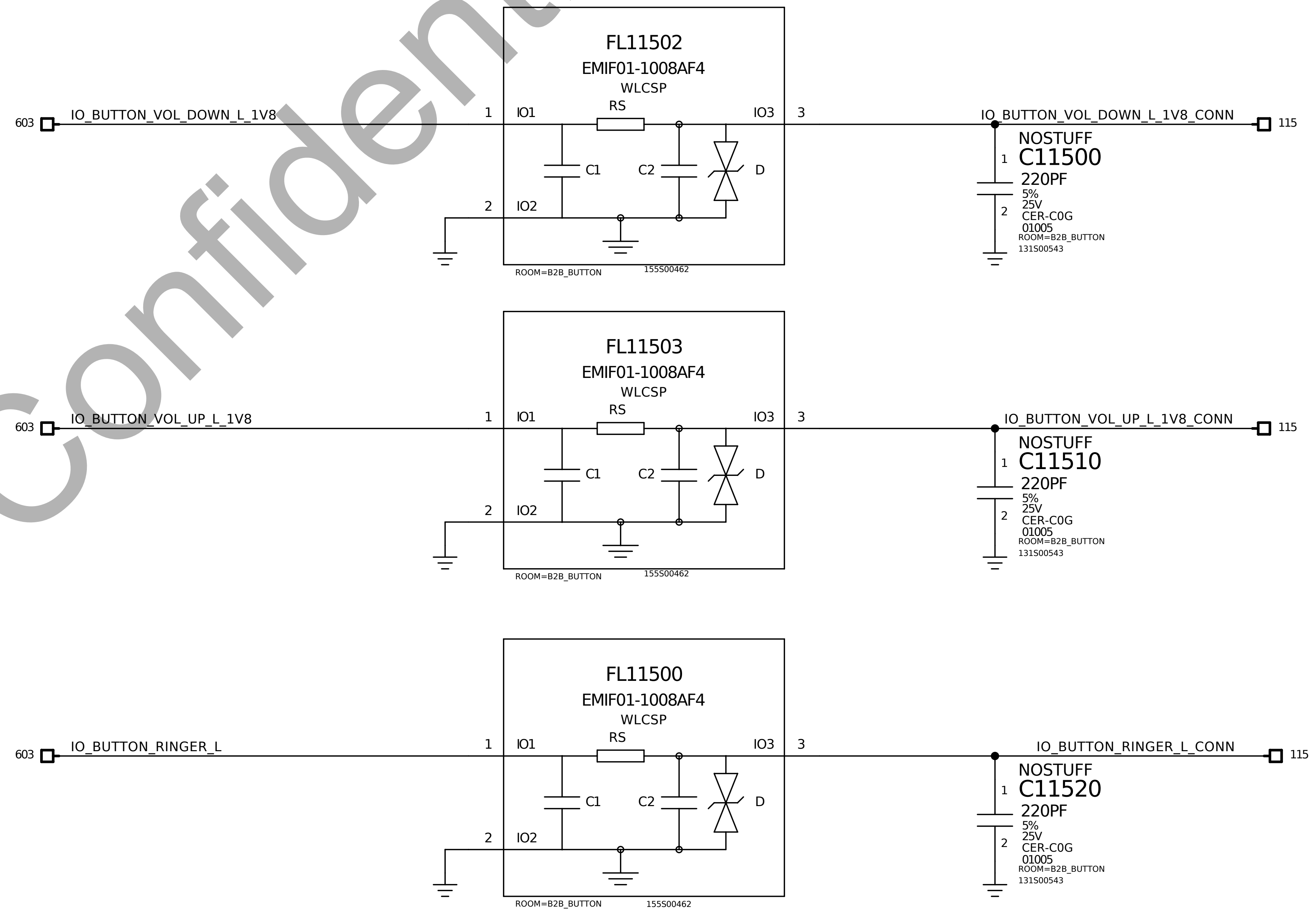
Button B2B

CONNECTOR


Flex Plug: 516S00837
J11500
ROOM=B2B_BUTTON
516S00836
BM55P0.5-2DS2-0.3V
F-ST-SM
11
12
7
8
3
4
1
2
5
6
9
10
13
14
115
IO_BUTTON_RINGER_L_CONN
115
IO_BUTTON_VOL_UP_L_1V8_CONN
IO_BUTTON_VOL_DOWN_L_1V8_CONN
115


FL11502
EMIF01-1008AF4
WLCSP
603
IO_BUTTON_VOL_DOWN_L_1V8
1
IO1
RS
IO3
3
C1
C2
D
2
IO2
ROOM=B2B_BUTTON
155S00462
IO_BUTTON_VOL_DOWN_L_1V8_CONN
115
NOSTUFF
C11500
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_BUTTON
131S00543
FL11503
EMIF01-1008AF4
WLCSP
603
IO_BUTTON_VOL_UP_L_1V8
1
IO1
RS
IO3
3
C1
C2
D
2
IO2
ROOM=B2B_BUTTON
155S00462
IO_BUTTON_VOL_UP_L_1V8_CONN
115
NOSTUFF
C11510
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_BUTTON
131S00543
FL11500
EMIF01-1008AF4
WLCSP
603
IO_BUTTON_RINGER_L
1
IO1
RS
IO3
3
C1
C2
D
2
IO2
ROOM=B2B_BUTTON
155S00462
IO_BUTTON_RINGER_L_CONN
115
NOSTUFF
C11520
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_BUTTON
131S00543

PAGE TITLE

B2B: Button (115)

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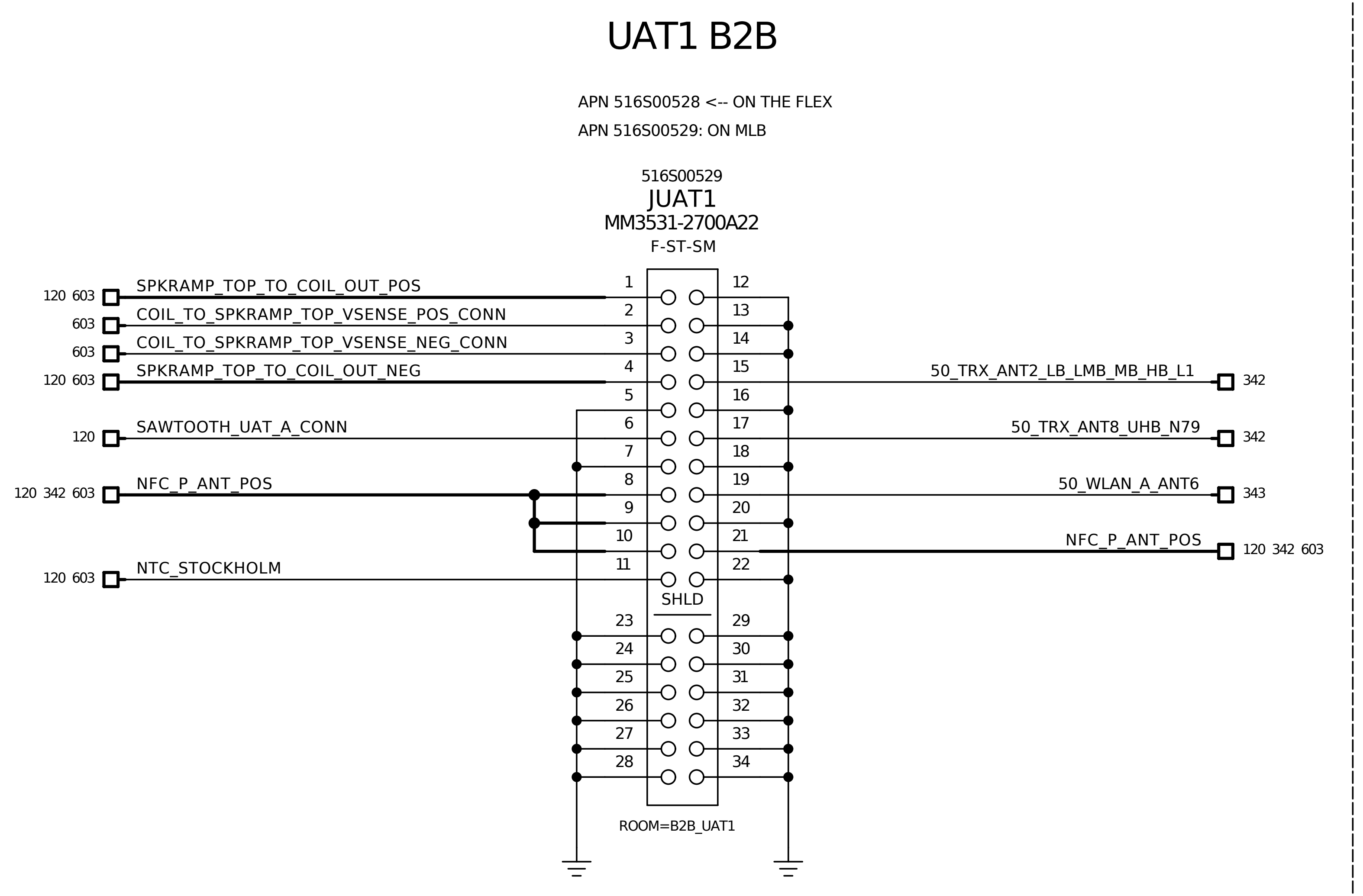
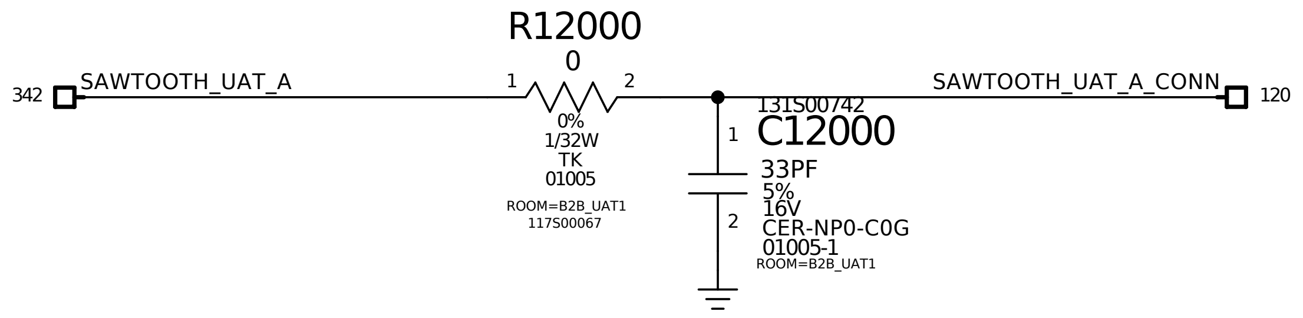
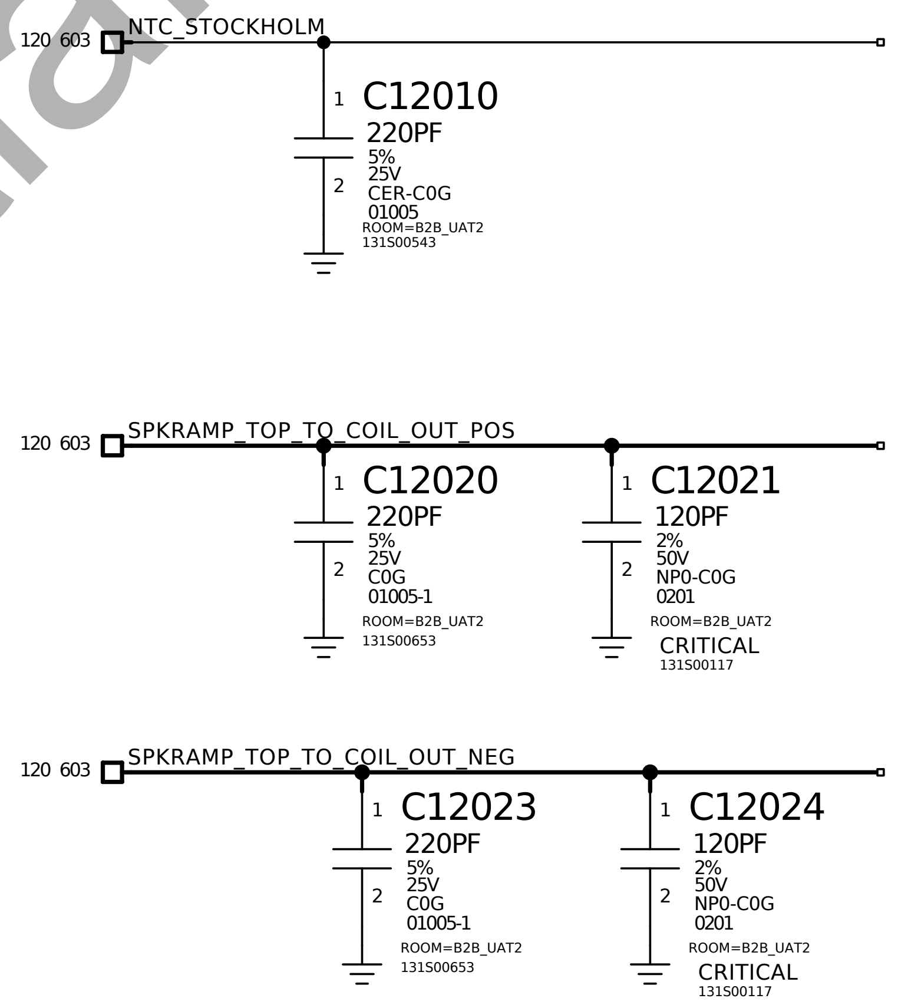
UAT1 B2B

CONNECTOR


UAT1 B2B
APN 516S00528 <-- ON THE FLEX
APN 516S00529: ON MLB
516S00529
JUAT1
MM3531-2700A22
F-ST-SM
120 603
SPKRAMP_TOP_TO_COIL_OUT_POS
603
COIL_TO_SPKRAMP_TOP_VSENSE_POS_CONN
603
COIL_TO_SPKRAMP_TOP_VSENSE_NEG_CONN
120 603
SPKRAMP_TOP_TO_COIL_OUT_NEG
120
SAWTOOTH_UAT_A_CONN
120 342 603
NFC_P_ANT_POS
120 603
NTC_STOCKHOLM
1 2 3 4 5 6 7 8 9 10 11
12 13 14 15 16 17 18 19 20 21 22
SHLD
23 24 25 26 27 28
29 30 31 32 33 34
50_TRX_ANT2_LB_LMB_MB_HB_L1
342
50_TRX_ANT8_UHB_N79
342
50_WLAN_A_ANT6
343
NFC_P_ANT_POS
120 342 603
ROOM=B2B_UAT1

SUBUS FILTERS


R12000
0
342
SAWTOOTH_UAT_A
1
2
0%
1/32W
TK
01005
ROOM=B2B_UAT1
117S00067
131S00742
C12000
1
2
33PF
5%
16V
CER-NP0-C0G
01005-1
ROOM=B2B_UAT1
SAWTOOTH_UAT_A_CONN
120


120 603
NTC_STOCKHOLM
C12010
1
2
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_UAT2
131S00543
120 603
SPKRAMP_TOP_TO_COIL_OUT_POS
C12020
1
2
220PF
5%
25V
C0G
01005-1
ROOM=B2B_UAT2
131S00653
C12021
1
2
120PF
2%
50V
NP0-C0G
0201
ROOM=B2B_UAT2
CRITICAL
131S00117
120 603
SPKRAMP_TOP_TO_COIL_OUT_NEG
C12023
1
2
220PF
5%
25V
C0G
01005-1
ROOM=B2B_UAT2
131S00653
C12024
1
2
120PF
2%
50V
NP0-C0G
0201
ROOM=B2B_UAT2
CRITICAL
131S00117

UAT ANTENNAS

ANT2	ANT4	ANT6	ANT8
LB	MB/HB	5GHZ	UHB
LMB/MB/HB	2.4GHZ		SAM
L1 GNSS	UHB		

PAGE TITLE

B2B: UAT1 (120)

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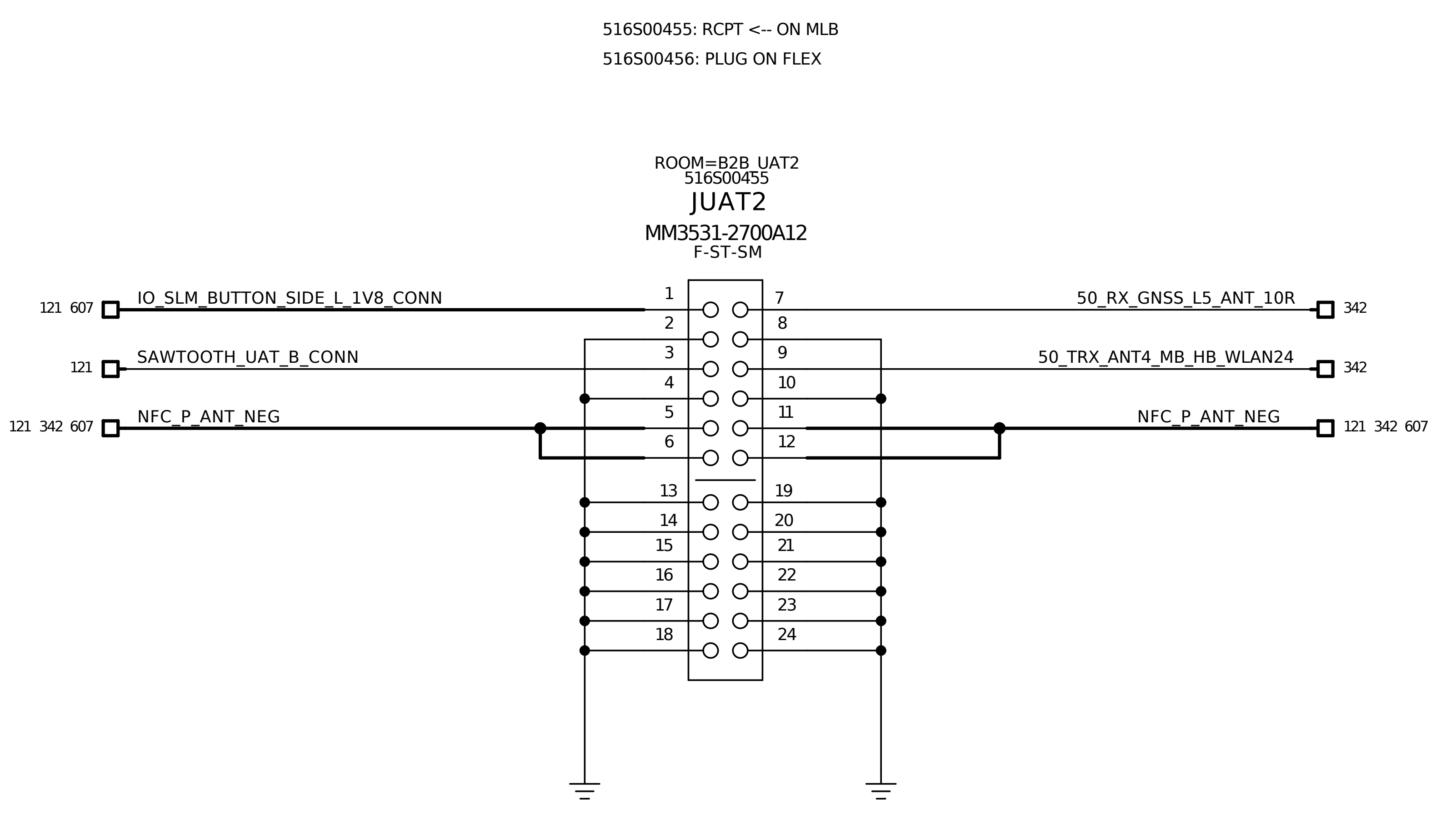
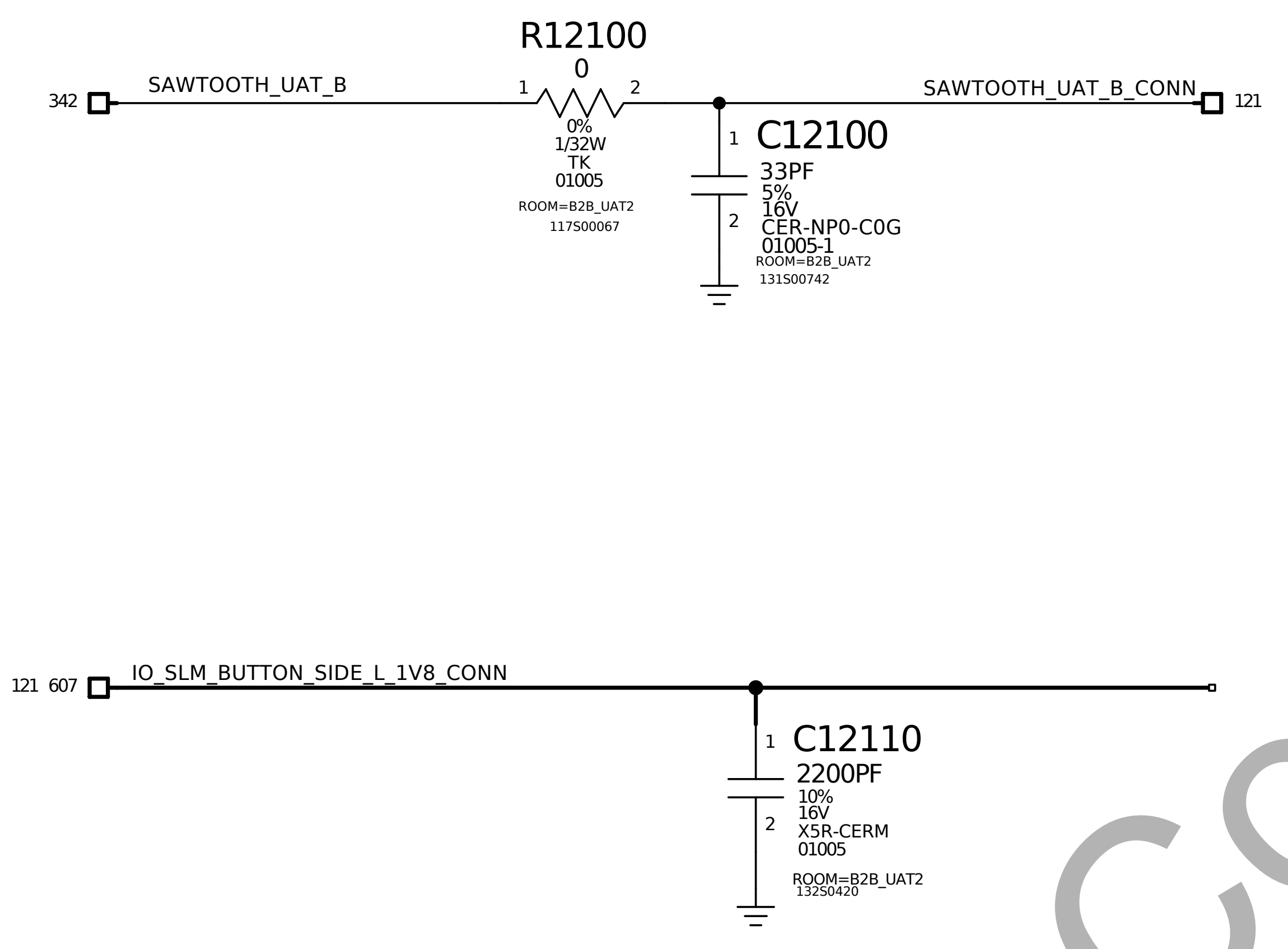
UAT2 B2B

CONNECTOR

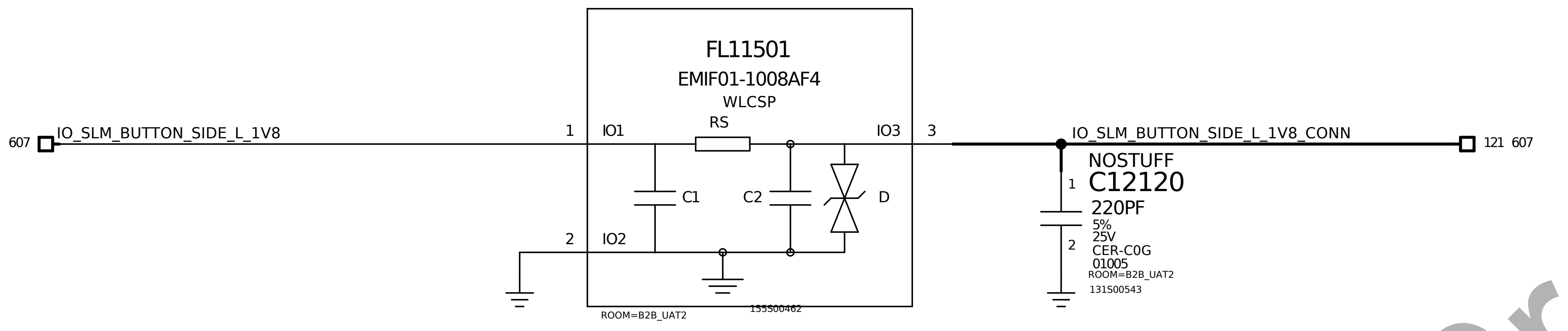


516S00455: RCPT <-- ON MLB
516S00456: PLUG ON FLEX
ROOM=B2B_UAT2
516S00455
JUAT2
MM3531-2700A12
F-ST-SM
121 607 IO_SLM_BUTTON_SIDE_L_1V8_CONN
121 SAWTOOTH_UAT_B_CONN
121 342 607 NFC_P_ANT_NEG
50_RX_GNSS_L5_ANT_10R 342
50_TRX_ANT4_MB_HB_WLAN24 342
NFC_P_ANT_NEG 121 342 607
1 2 3 4 5 6 13 14 15 16 17 18
7 8 9 10 11 12 19 20 21 22 23 24

SUBUS FILTERS



R12100
0
1 2
0%
1/32W
TK
01005
ROOM=B2B_UAT2
117S00067
342 SAWTOOTH_UAT_B
SAWTOOTH_UAT_B_CONN 121
C12100
33PF
5%
16V
CER-NP0-C0G
01005-1
ROOM=B2B_UAT2
131S00742
121 607 IO_SLM_BUTTON_SIDE_L_1V8_CONN
C12110
2200PF
10%
16V
X5R-CERM
01005
ROOM=B2B_UAT2
132S0420



FL11501
EMIF01-1008AF4
WLCSP
607 IO_SLM_BUTTON_SIDE_L_1V8
1 IO1
RS
IO3 3
2 IO2
C1
C2
D
ROOM=B2B_UAT2
155S00462
IO_SLM_BUTTON_SIDE_L_1V8_CONN 121 607
NOSTUFF
C12120
220PF
5%
25V
CER-C0G
01005
ROOM=B2B_UAT2
131S00543

PAGE TITLE

B2B: UAT2 (121)

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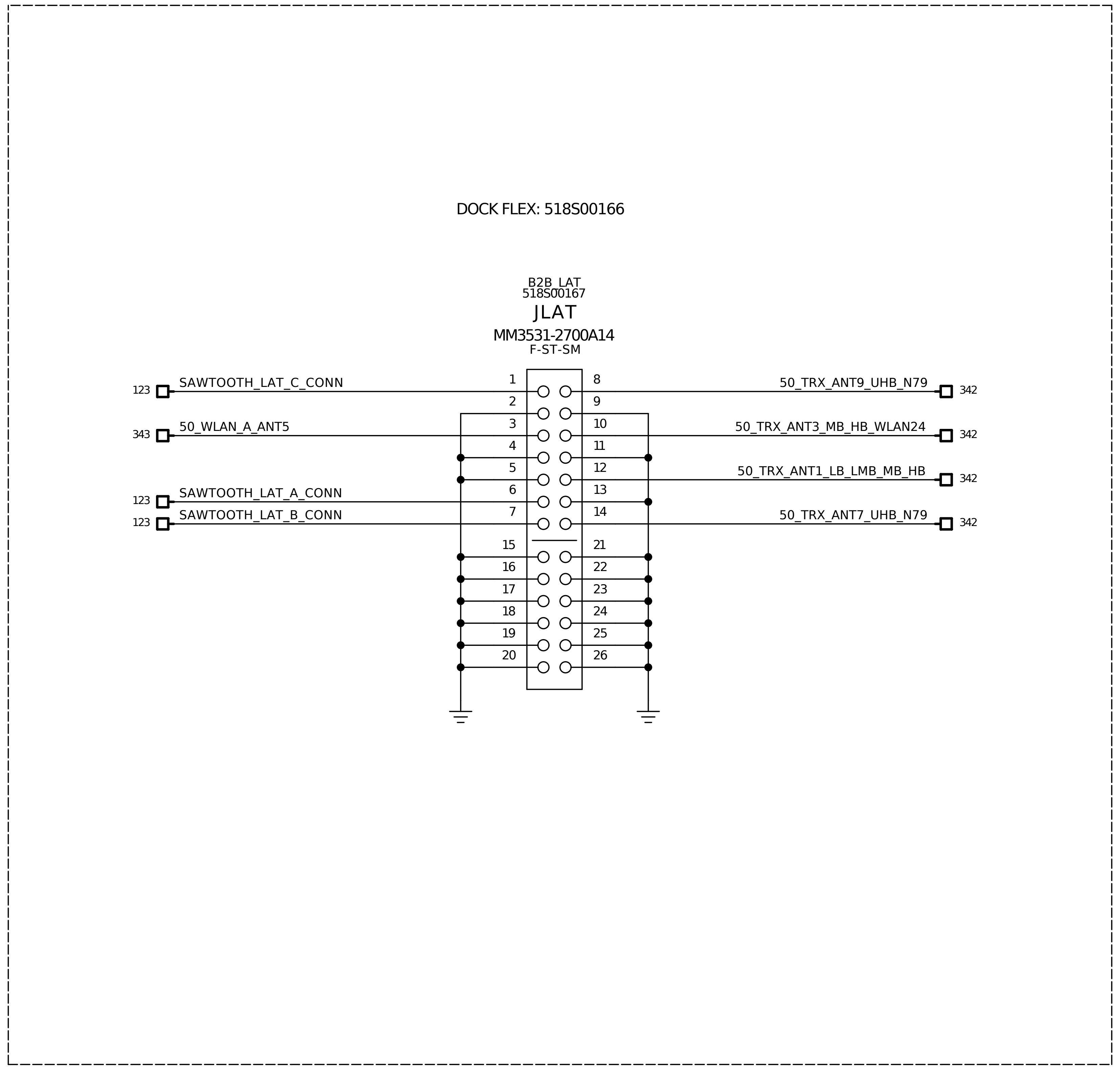
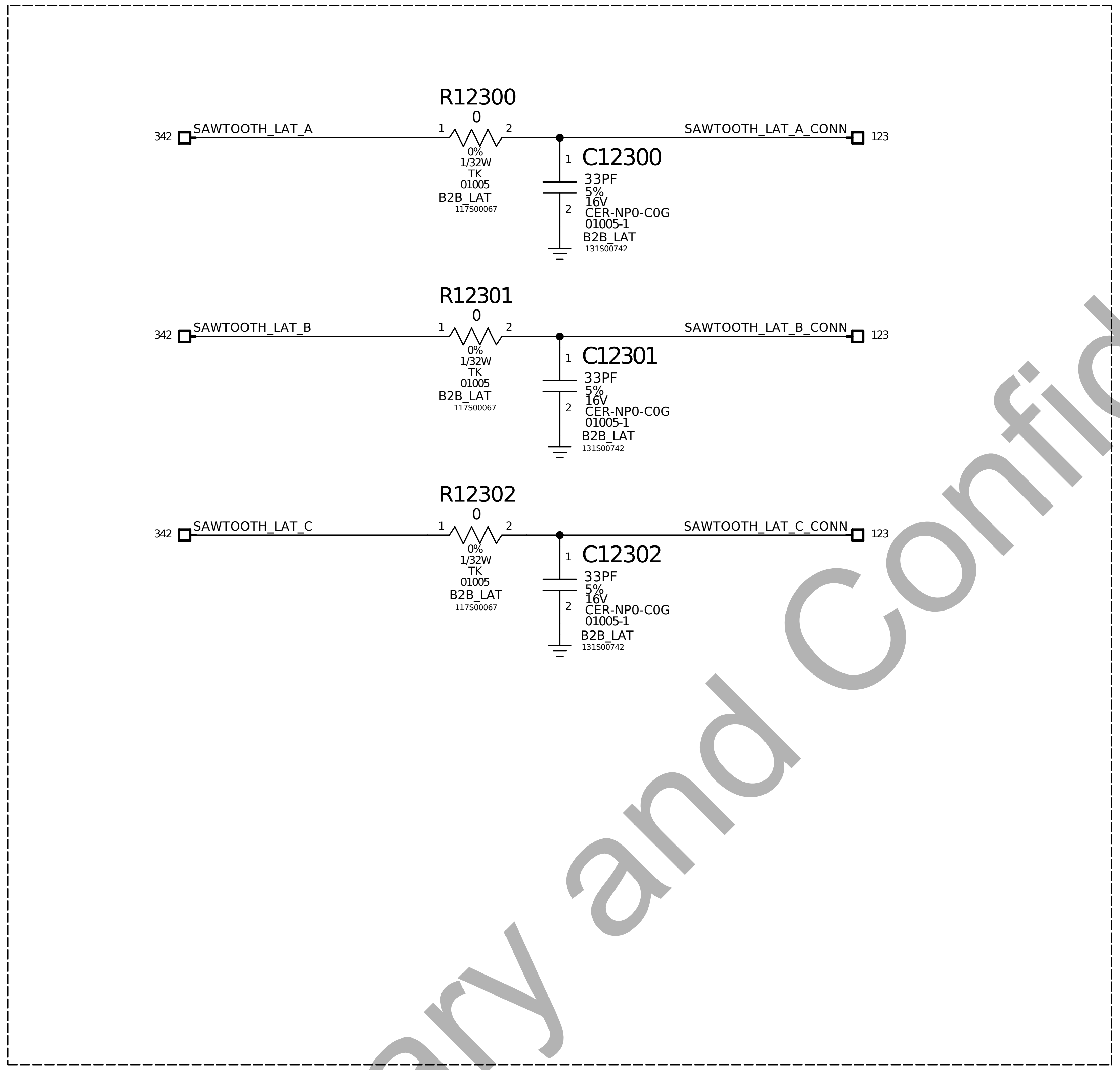
LAT B2B

CONNECTOR


DOCK FLEX: 518S00166
B2B_LAT
518S00167
JLAT
MM3531-2700A14
F-ST-SM
123 SAWTOOTH_LAT_C_CONN 1
2
343 50_WLAN_A_ANT5 3
4
5
123 SAWTOOTH_LAT_A_CONN 6
123 SAWTOOTH_LAT_B_CONN 7
15
16
17
18
19
20
8 50_TRX_ANT9_UHB_N79 342
9
10 50_TRX_ANT3_MB_HB_WLAN24 342
11
12 50_TRX_ANT1_LB_LMB_MB_HB 342
13
14 50_TRX_ANT7_UHB_N79 342
21
22
23
24
25
26

SUBUS FILTERS


R12300
0
342 SAWTOOTH_LAT_A
1
2
0%
1/32W
TK
01005
B2B_LAT
117S00067
SAWTOOTH_LAT_A_CONN 123
C12300
1
2
33PF
5%
16V
CER-NP0-C0G
01005-1
B2B_LAT
131S00742
R12301
0
342 SAWTOOTH_LAT_B
1
2
0%
1/32W
TK
01005
B2B_LAT
117S00067
SAWTOOTH_LAT_B_CONN 123
C12301
1
2
33PF
5%
16V
CER-NP0-C0G
01005-1
B2B_LAT
131S00742
R12302
0
342 SAWTOOTH_LAT_C
1
2
0%
1/32W
TK
01005
B2B_LAT
117S00067
SAWTOOTH_LAT_C_CONN 123
C12302
1
2
33PF
5%
16V
CER-NP0-C0G
01005-1
B2B_LAT
131S00742

PAGE TITLE

B2B: LAT (123)

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POWER
603 PP_VDD_MAIN_WLAN
PP_VDD_MAIN_WLAN 343
343 606 PP_VDD_MAIN_5GFEML_ARC_BOT_SPK
VOLTAGE=3.8 V
PP_VDD_MAIN_5GFEML_ARC_BOT_SPK 80 83
342 343 606 PP1V825_S2_LOWER
VOLTAGE=1.825 V
PP1V825_S2_LOWER 114
PP1V825_S2_LOWER 84
603 PP1V825_S2_UPPER
PP1V825_S2_UPPER 105
606 PP1V825_S4_LOWER
VOLTAGE=1.825 V
PP1V825_S4_LOWER 80
606 PP1V24_S4_LOWER
VOLTAGE=1.24 V
PP1V24_S4_LOWER 80
106 PPVAR_RCAM_PVDD
PPVAR_RCAM_PVDD 606
VOLTAGE=3.3 V
606 PP1V8_RCAM_VDDIO
VOLTAGE=1.8 V
PP1V8_RCAM_VDDIO 106
PP1V8_RCAM_VDDIO
PCIE
604 90_PCIE_GP1_AP_TO_BB_REFCLK_P
90_PCIE_GP1_AP_TO_BB_REFCLK_P 342
604 90_PCIE_GP1_AP_TO_BB_REFCLK_N
90_PCIE_GP1_AP_TO_BB_REFCLK_N 342
604 90_PCIE_GP1_AP_FROM_BB_RX_P
90_PCIE_GP1_AP_FROM_BB_RX_P 342
604 90_PCIE_GP1_AP_FROM_BB_RX_N
90_PCIE_GP1_AP_FROM_BB_RX_N 342
604 90_PCIE_GP1_AP_TO_BB_TX_P
90_PCIE_GP1_AP_TO_BB_TX_P 342
604 90_PCIE_GP1_AP_TO_BB_TX_N
90_PCIE_GP1_AP_TO_BB_TX_N 342
I2C
605 I2C1_AOP_SCL
I2C1_AOP_SCL 114
605 I2C1_AOP_SDA
I2C1_AOP_SDA 114
I2C1_AOP_SCL 113
I2C1_AOP_SDA 113
I2C3_AOP_SCL_FLICKER_DET
I2C3_AOP_SCL_FLICKER_DET 105
I2C3_AOP_SDA_FLICKER_DET
I2C3_AOP_SDA_FLICKER_DET 105
329 606 I2C2_AOP_SCL
I2C2_AOP_SCL 83
329 606 I2C2_AOP_SDA
I2C2_AOP_SDA 83
I2C2_AOP_SCL 80
I2C2_AOP_SDA 80
I2C2_AOP_SCL 84
I2C2_AOP_SDA 84
606 I2C1_CAM_PMU1_SCL_1V8
I2C1_CAM_PMU1_SCL_1V8 106
606 I2C1_CAM_PMU1_SDA_1V8
I2C1_CAM_PMU1_SDA_1V8 106
607 I2C3_CAM_PMU1_SCL_1V8
I2C3_CAM_PMU1_SCL_1V8 109
607 I2C3_CAM_PMU1_SDA_1V8
I2C3_CAM_PMU1_SDA_1V8 109
110 607 I2C4_CAM_PMU1_SCL_1V8
I2C4_CAM_PMU1_SCL_1V8 110
110 607 I2C4_CAM_PMU1_SDA_1V8
I2C4_CAM_PMU1_SDA_1V8 110
606 I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK
R14100
49.9
1
2
1%
1/32W
TK
01005
ROOM=B2B_LAT
118S00264
I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK_R 80 329
131S00741
C14100
1
2
22PF
5%
16V
C0G
01005-1
ROOM=B2B_UAT2
606 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK
R14101
49.9
1
2
1%
1/32W
TK
01005
ROOM=B2B_LAT
118S00264
I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK_R 83 84 329
131S00741
C14101
1
2
22PF
5%
16V
C0G
01005-1
ROOM=B2B_UAT2

PAGE TITLE

SYSTEM: Aliases (141)

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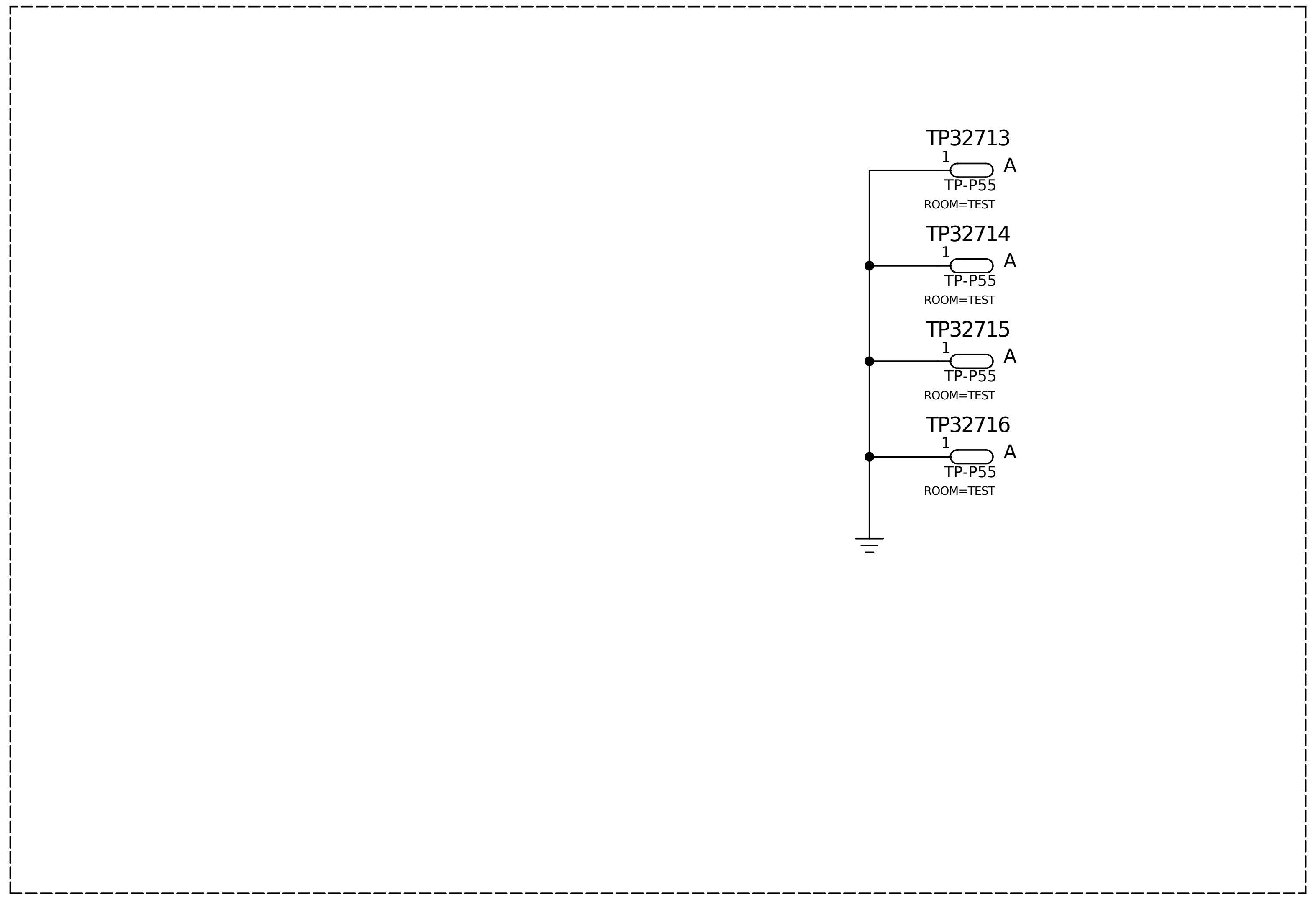
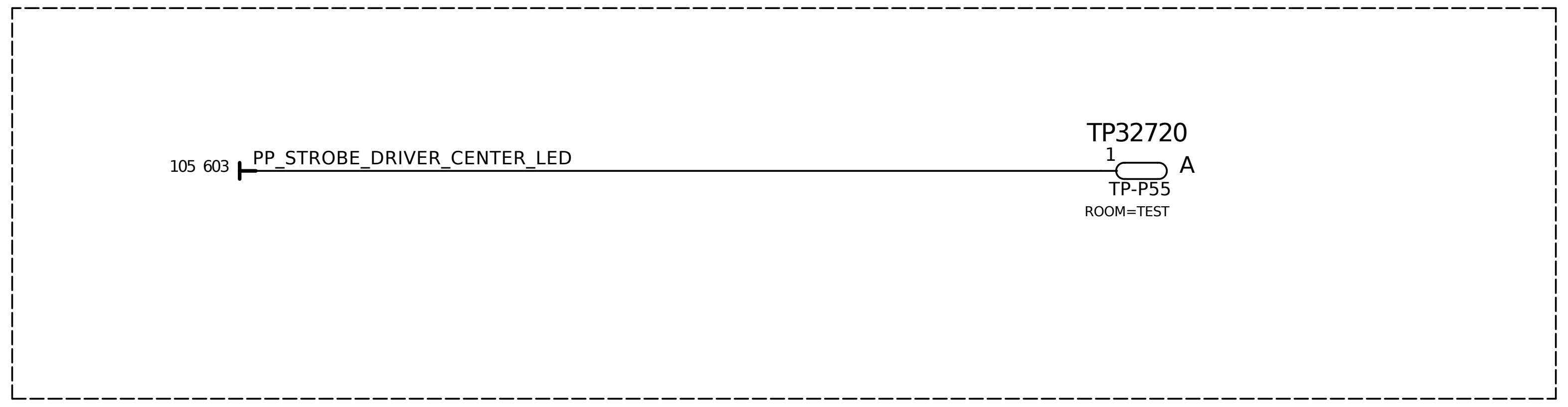
BG Test Points

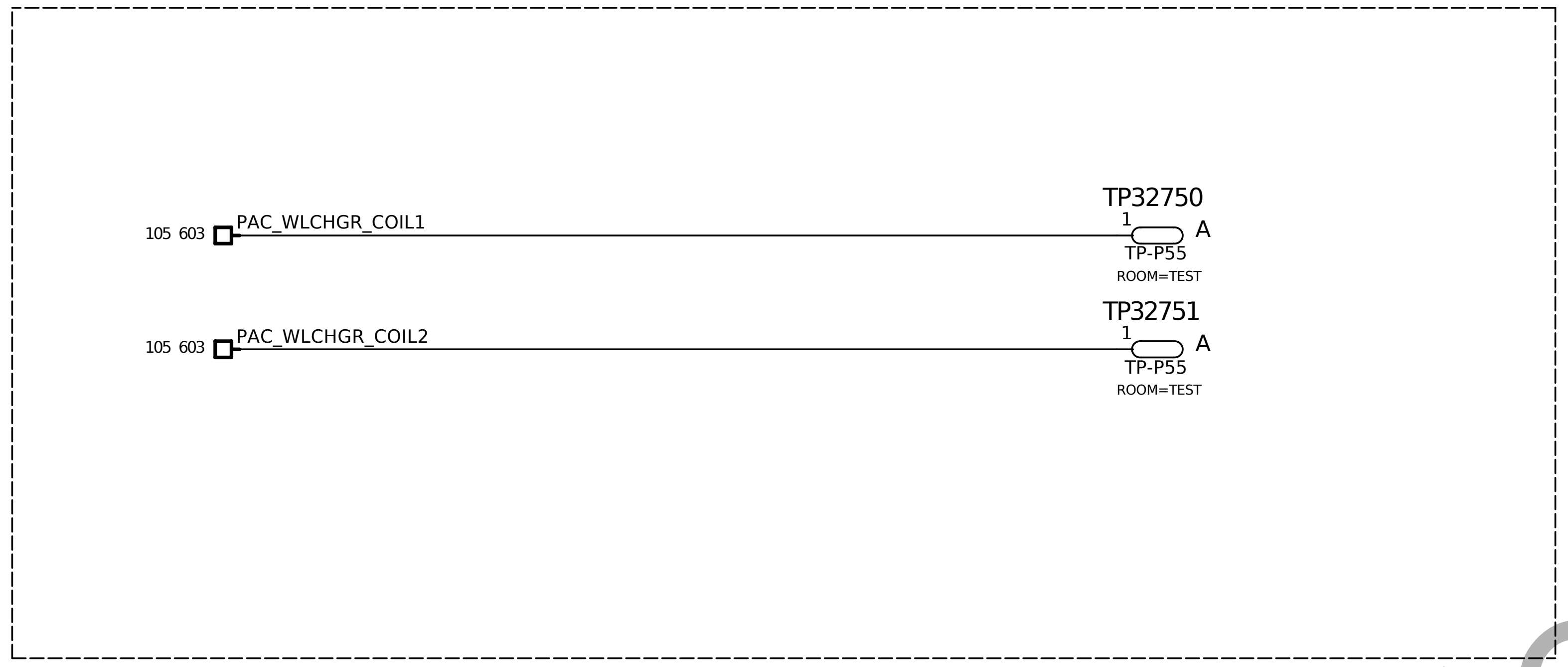
Power + GND


TP32713
1
A
TP-P55
ROOM=TEST
TP32714
1
A
TP-P55
ROOM=TEST
TP32715
1
A
TP-P55
ROOM=TEST
TP32716
1
A
TP-P55
ROOM=TEST

STROBE


105 603
PP_STROBE_DRIVER_CENTER_LED
TP32720
1
A
TP-P55
ROOM=TEST

Dotara Power


105 603
PAC_WLCHGR_COIL1
TP32750
1
A
TP-P55
ROOM=TEST
105 603
PAC_WLCHGR_COIL2
TP32751
1
A
TP-P55
ROOM=TEST

PAGE TITLE

TESTING: Test Points (327)

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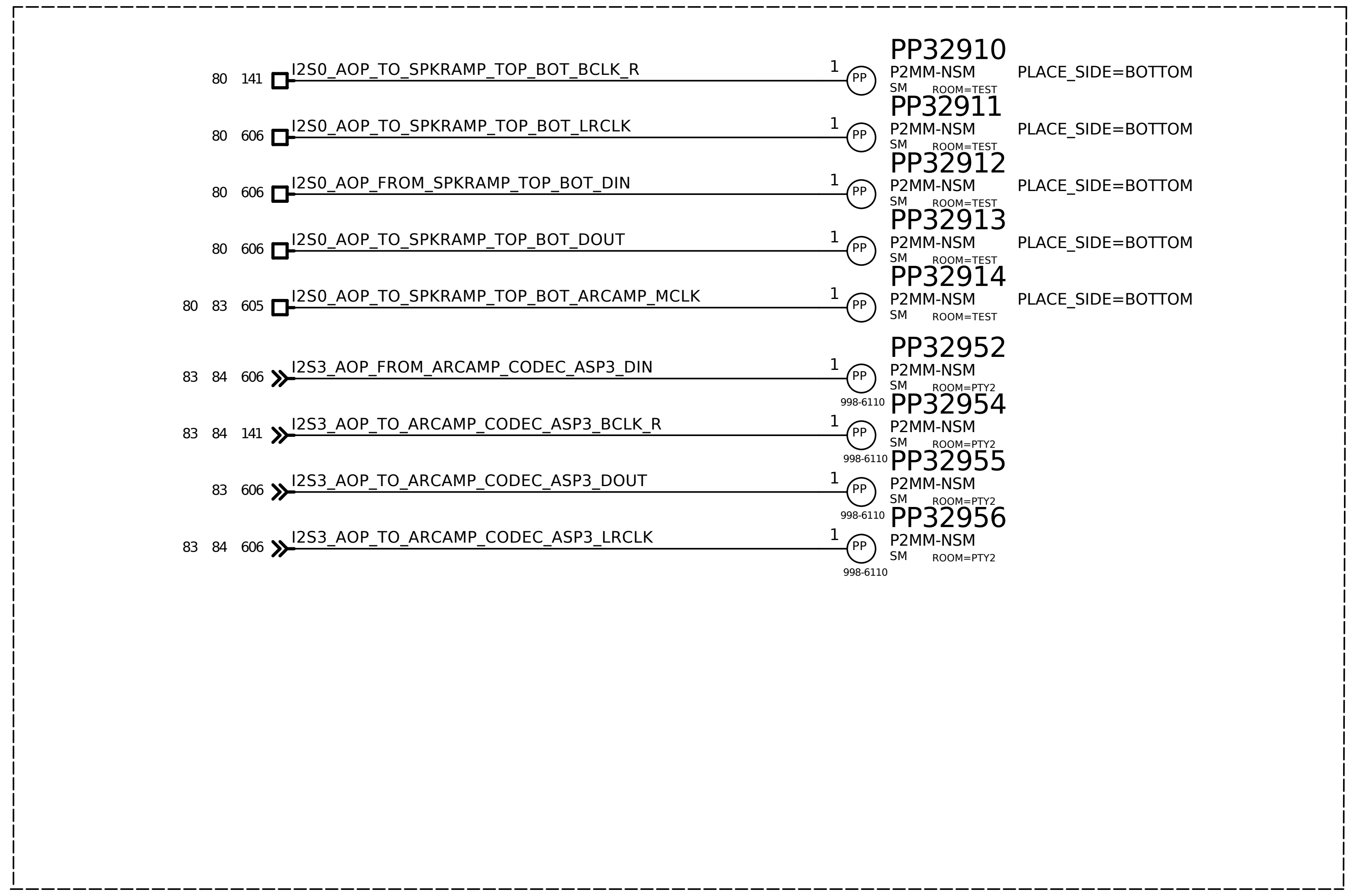
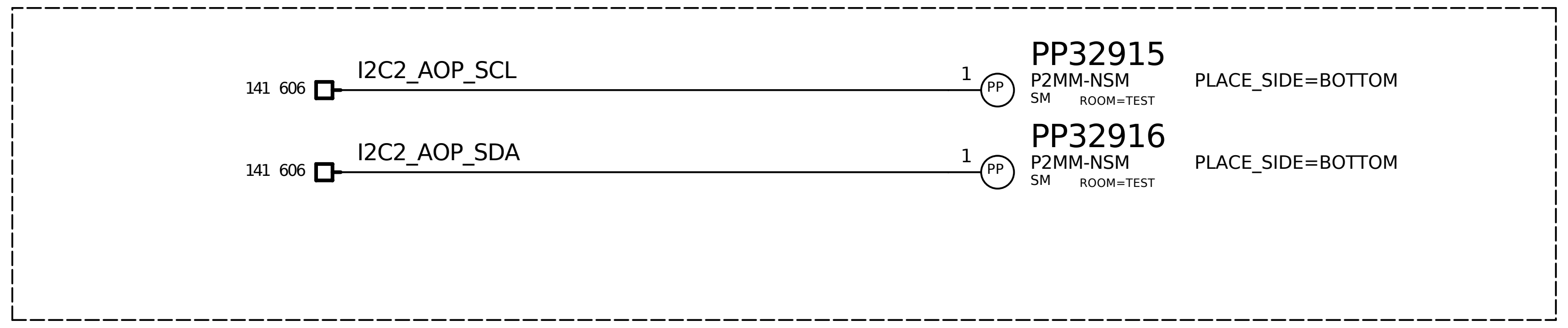
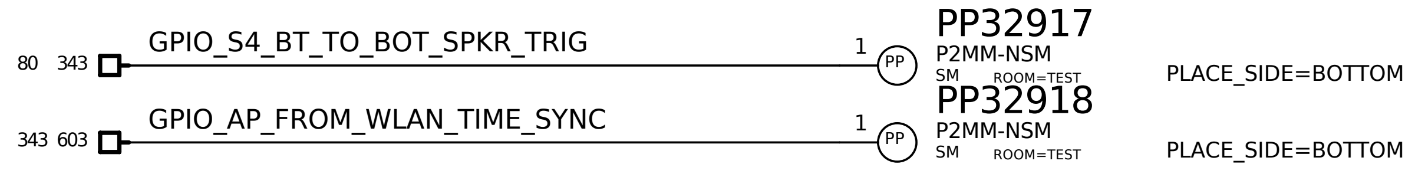
BG Probe Points

I2S


80 141 I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK_R 1 PP PP32910 P2MM-NSM SM ROOM=TEST PLACE_SIDE=BOTTOM
80 606 I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK 1 PP PP32911 P2MM-NSM SM ROOM=TEST PLACE_SIDE=BOTTOM
80 606 I2S0_AOP_FROM_SPKRAMP_TOP_BOT_DIN 1 PP PP32912 P2MM-NSM SM ROOM=TEST PLACE_SIDE=BOTTOM
80 606 I2S0_AOP_TO_SPKRAMP_TOP_BOT_DOUT 1 PP PP32913 P2MM-NSM SM ROOM=TEST PLACE_SIDE=BOTTOM
80 83 605 I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK 1 PP PP32914 P2MM-NSM SM ROOM=TEST PLACE_SIDE=BOTTOM
83 84 606 I2S3_AOP_FROM_ARCAMP_CODEC_ASP3_DIN 1 PP PP32952 P2MM-NSM SM ROOM=PTY2 998-6110
83 84 141 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK_R 1 PP PP32954 P2MM-NSM SM ROOM=PTY2 998-6110
83 606 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_DOUT 1 PP PP32955 P2MM-NSM SM ROOM=PTY2 998-6110
83 84 606 I2S3_AOP_TO_ARCAMP_CODEC_ASP3_LRCLK 1 PP PP32956 P2MM-NSM SM ROOM=PTY2 998-6110

I2C


141 606 I2C2_AOP_SCL 1 PP PP32915 P2MM-NSM SM ROOM=TEST PLACE_SIDE=BOTTOM
141 606 I2C2_AOP_SDA 1 PP PP32916 P2MM-NSM SM ROOM=TEST PLACE_SIDE=BOTTOM


80 343 GPIO_S4_BT_TO_BOT_SPKR_TRIG 1 PP PP32917 P2MM-NSM SM ROOM=TEST PLACE_SIDE=BOTTOM
343 603 GPIO_AP_FROM_WLAN_TIME_SYNC 1 PP PP32918 P2MM-NSM SM ROOM=TEST PLACE_SIDE=BOTTOM

PAGE TITLE
TESTING: Probe Points (329)

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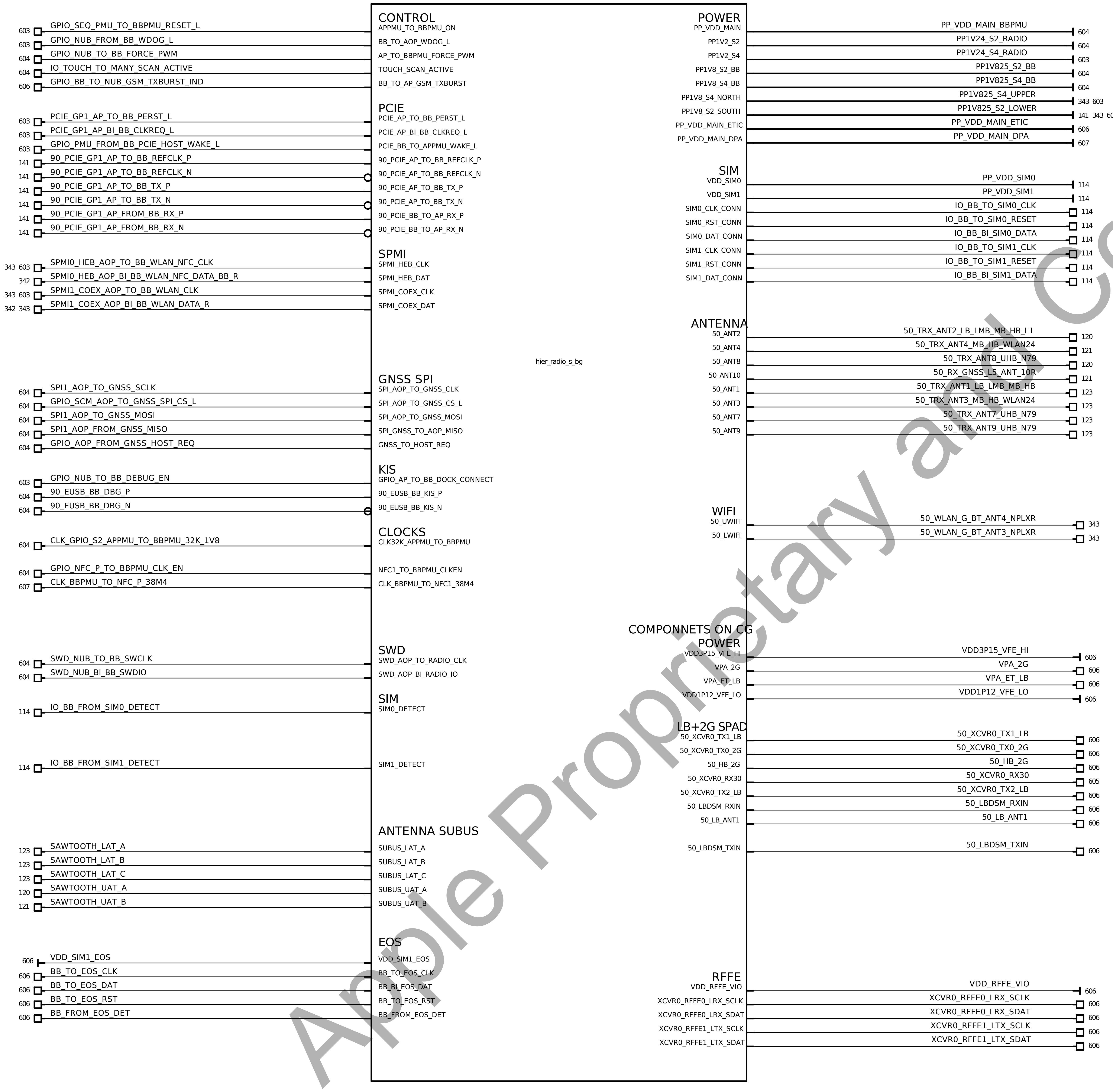
HIERARCHIES

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
132S0420	132S00264	C2134_C	CAP,CER,X5R,2200PF,10%,16V,01005
132S00308	132S00264	C2134_C	CAP,X5R,2200PF,10%,16V,KYO,01005

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S0775	138S0860	C1215_C	CAP,CER,X6S,1UF,10%,25V,0402

HIER_RADIO_BG



hier_radio_s_bg
CONTROL
603 GPIO_SEQ_PMU_TO_BBPMU_RESET_L — APPMU_TO_BBPMU_ON
603 GPIO_NUB_FROM_BB_WDOG_L — BB_TO_AOP_WDOG_L
604 GPIO_NUB_TO_BB_FORCE_PWM — AP_TO_BBPMU_FORCE_PWM
604 IO_TOUCH_TO_MANY_SCAN_ACTIVE — TOUCH_SCAN_ACTIVE
606 GPIO_BB_TO_NUB_GSM_TXBURST_IND — BB_TO_AP_GSM_TXBURST
PCIE
603 PCIE_GP1_AP_TO_BB_PERST_L — PCIE_AP_TO_BB_PERST_L
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603 GPIO_PMU_FROM_BB_PCIE_HOST_WAKE_L — PCIE_BB_TO_APPMU_WAKE_L
141 90_PCIE_GP1_AP_TO_BB_REFCLK_P — 90_PCIE_AP_TO_BB_REFCLK_P
141 90_PCIE_GP1_AP_TO_BB_REFCLK_N — 90_PCIE_AP_TO_BB_REFCLK_N
141 90_PCIE_GP1_AP_TO_BB_TX_P — 90_PCIE_AP_TO_BB_TX_P
141 90_PCIE_GP1_AP_TO_BB_TX_N — 90_PCIE_AP_TO_BB_TX_N
141 90_PCIE_GP1_AP_FROM_BB_RX_P — 90_PCIE_BB_TO_AP_RX_P
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342 SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA_BB_R — SPMI_HEB_DAT
343 603 SPMI1_COEX_AOP_TO_BB_WLAN_CLK — SPMI_COEX_CLK
342 343 SPMI1_COEX_AOP_BI_BB_WLAN_DATA_R — SPMI_COEX_DAT
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123 SAWTOOTH_LAT_B — SUBUS_LAT_B
123 SAWTOOTH_LAT_C — SUBUS_LAT_C
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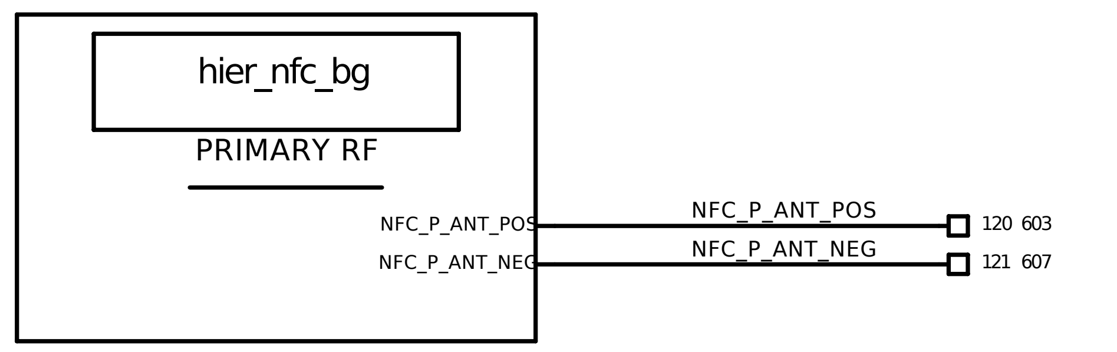
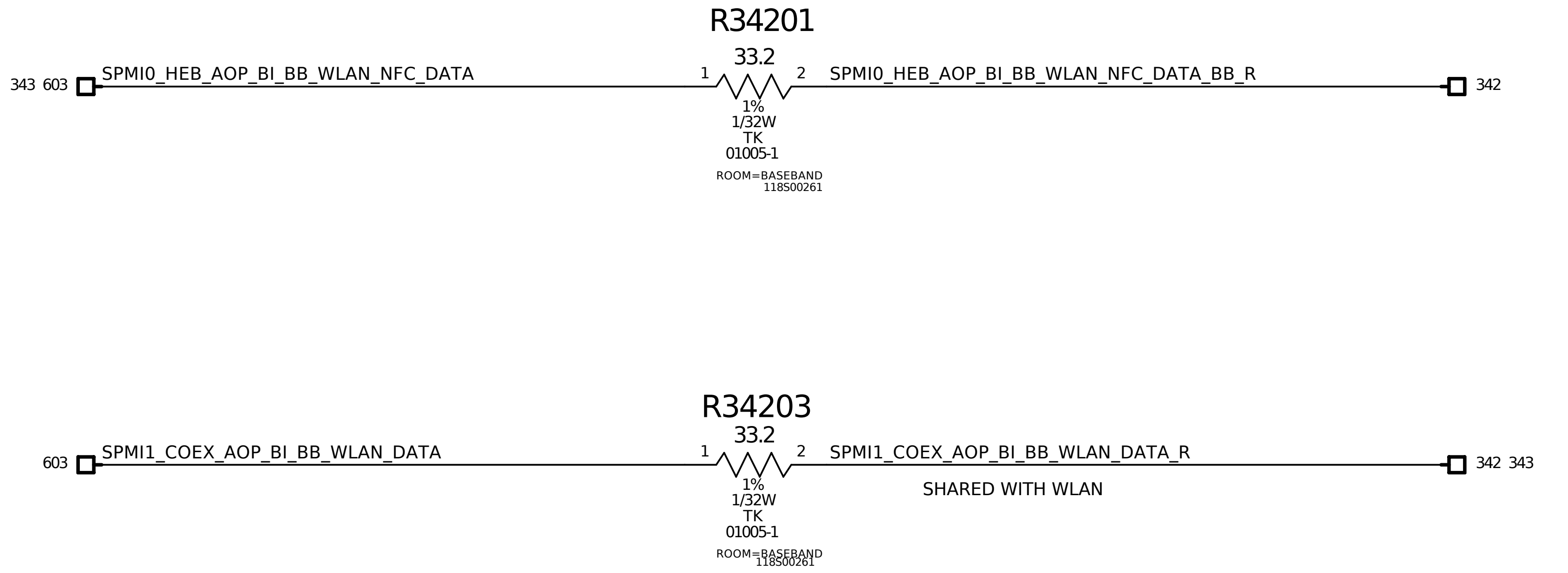
XCVR0_RFFE1_LTX_SDAT — XCVR0_RFFE1_LTX_SDAT 606

HIER_NFC_BG



hier_nfc_bg
PRIMARY RF
NFC_P_ANT_POS — NFC_P_ANT_POS 120 603
NFC_P_ANT_NEG — NFC_P_ANT_NEG 121 607

TO BASEBAND



R34201
343 603 SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA
1 33.2 2
1%
1/32W
TK
01005-1
ROOM=BASEBAND
118S00261
SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA_BB_R 342
R34203
603 SPMI1_COEX_AOP_BI_BB_WLAN_DATA
1 33.2 2
1%
1/32W
TK
01005-1
ROOM=BASEBAND
118S00261
SPMI1_COEX_AOP_BI_BB_WLAN_DATA_R 342 343
SHARED WITH WLAN

For SPMI series resistors, if drivers are close together, only one series resistor is needed.

SYNCING:

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D

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ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
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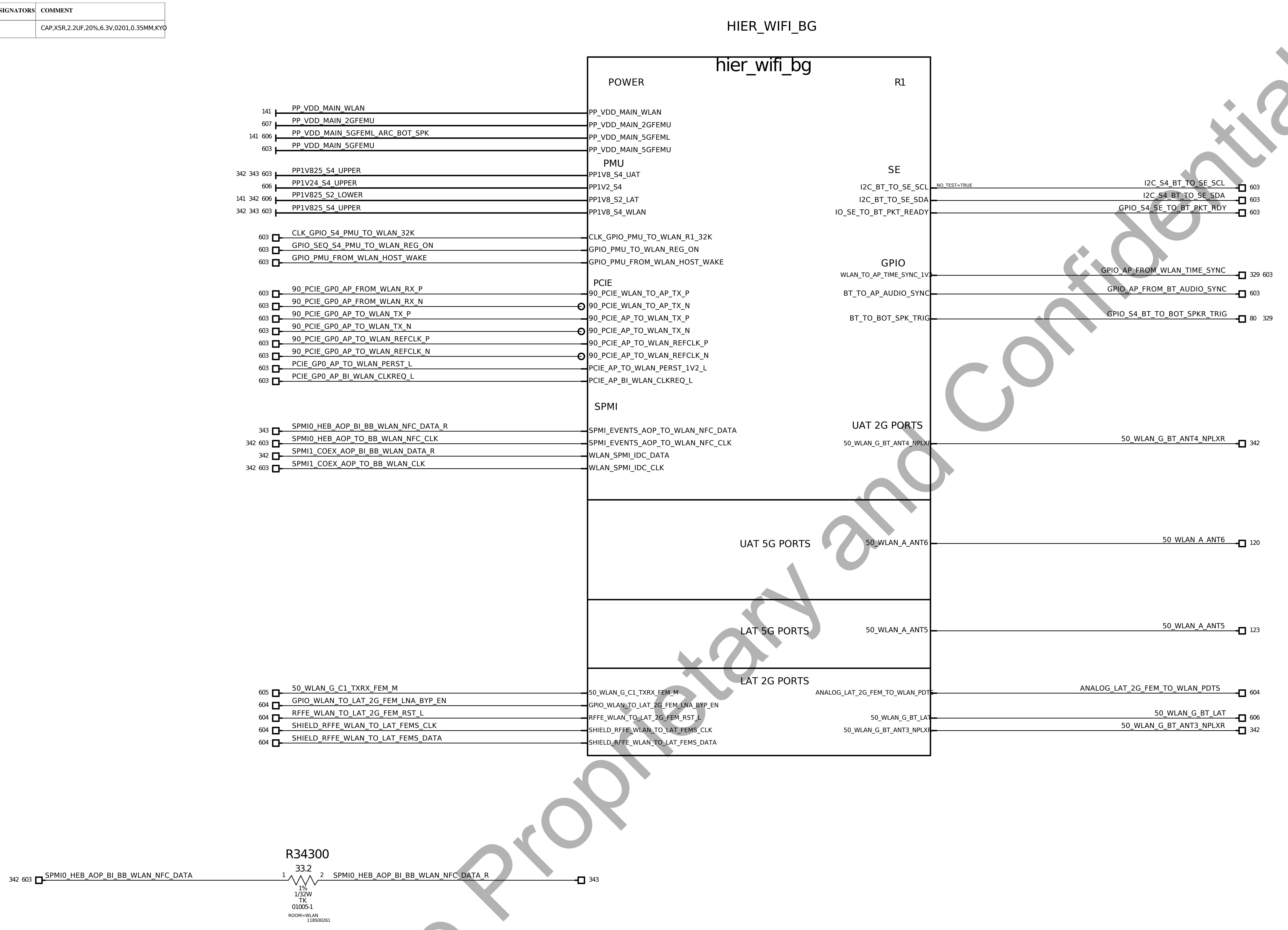
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hier_wifi_bg
POWER
R1
141 PP_VDD_MAIN_WLAN — PP_VDD_MAIN_WLAN
607 PP_VDD_MAIN_2GFEMU — PP_VDD_MAIN_2GFEMU
141 606 PP_VDD_MAIN_5GFEML_ARC_BOT_SPK — PP_VDD_MAIN_5GFEML
603 PP_VDD_MAIN_5GFEMU — PP_VDD_MAIN_5GFEMU
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342 343 603 PP1V825_S4_UPPER — PP1V8_S4_UAT
606 PP1V24_S4_UPPER — PP1V2_S4
141 342 606 PP1V825_S2_LOWER — PP1V8_S2_LAT
342 343 603 PP1V825_S4_UPPER — PP1V8_S4_WLAN
603 CLK_GPIO_S4_PMU_TO_WLAN_32K — CLK_GPIO_PMU_TO_WLAN_R1_32K
603 GPIO_SEQ_S4_PMU_TO_WLAN_REG_ON — GPIO_PMU_TO_WLAN_REG_ON
603 GPIO_PMU_FROM_WLAN_HOST_WAKE — GPIO_PMU_FROM_WLAN_HOST_WAKE
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603 90_PCIE_GP0_AP_FROM_WLAN_RX_P — 90_PCIE_WLAN_TO_AP_TX_P
603 90_PCIE_GP0_AP_FROM_WLAN_RX_N — 90_PCIE_WLAN_TO_AP_TX_N
603 90_PCIE_GP0_AP_TO_WLAN_TX_P — 90_PCIE_AP_TO_WLAN_TX_P
603 90_PCIE_GP0_AP_TO_WLAN_TX_N — 90_PCIE_AP_TO_WLAN_TX_N
603 90_PCIE_GP0_AP_TO_WLAN_REFCLK_P — 90_PCIE_AP_TO_WLAN_REFCLK_P
603 90_PCIE_GP0_AP_TO_WLAN_REFCLK_N — 90_PCIE_AP_TO_WLAN_REFCLK_N
603 PCIE_GP0_AP_TO_WLAN_PERST_L — PCIE_AP_TO_WLAN_PERST_1V2_L
603 PCIE_GP0_AP_BI_WLAN_CLKREQ_L — PCIE_AP_BI_WLAN_CLKREQ_L
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343 SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA_R — SPMI_EVENTS_AOP_TO_WLAN_NFC_DATA
342 603 SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK — SPMI_EVENTS_AOP_TO_WLAN_NFC_CLK
342 SPMI1_COEX_AOP_BI_BB_WLAN_DATA_R — WLAN_SPMI_IDC_DATA
342 603 SPMI1_COEX_AOP_TO_BB_WLAN_CLK — WLAN_SPMI_IDC_CLK
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50_WLAN_G_BT_ANT3_NPLXR — 50_WLAN_G_BT_ANT3_NPLXR 342
R34300
33.2
1
2
1%
1/32W
TK
01005-1
ROOM=WLAN
118S00261
342 603 SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA
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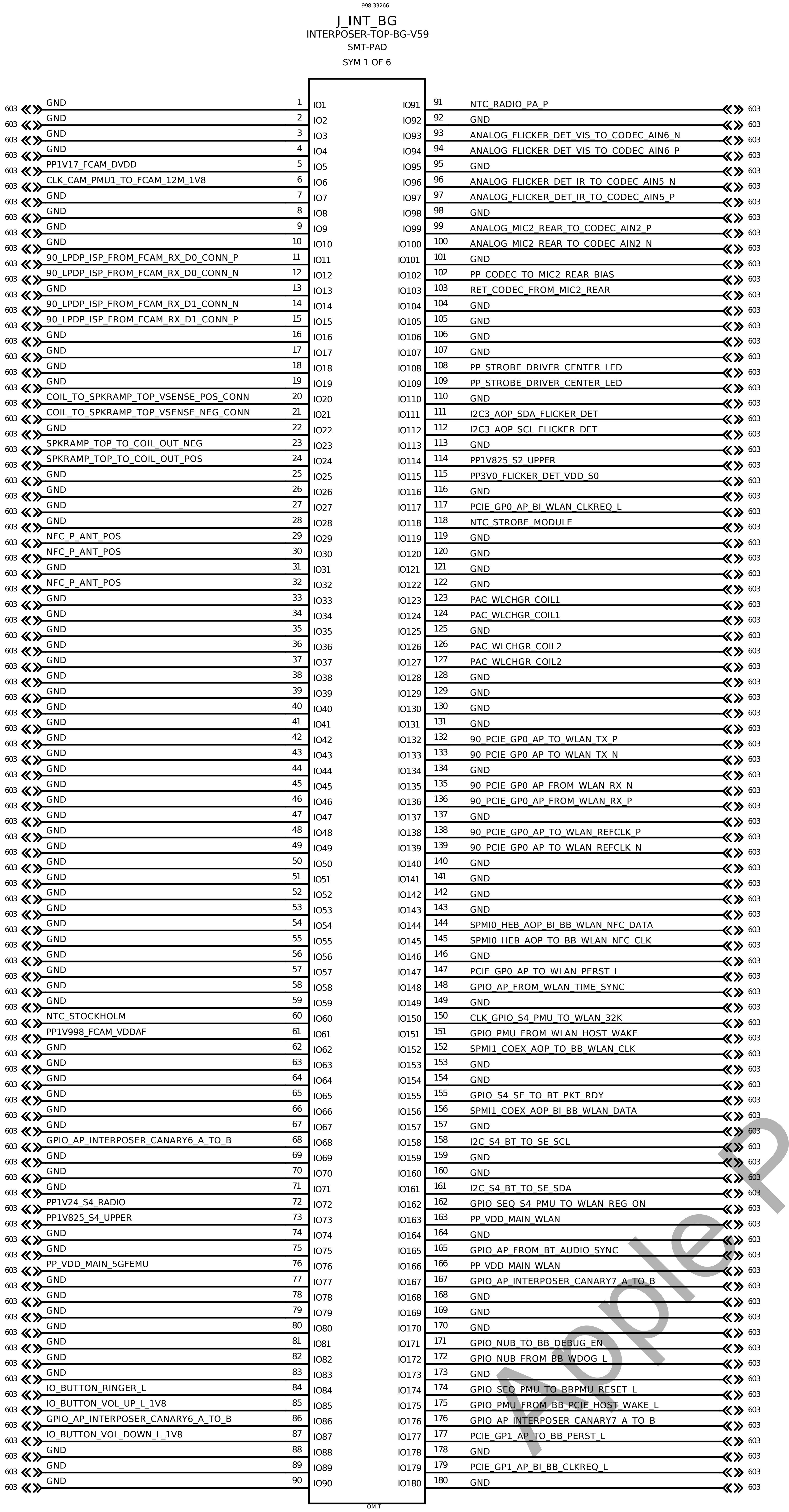
998-33266
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603 GND 1 IO1
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603 GND 3 IO3
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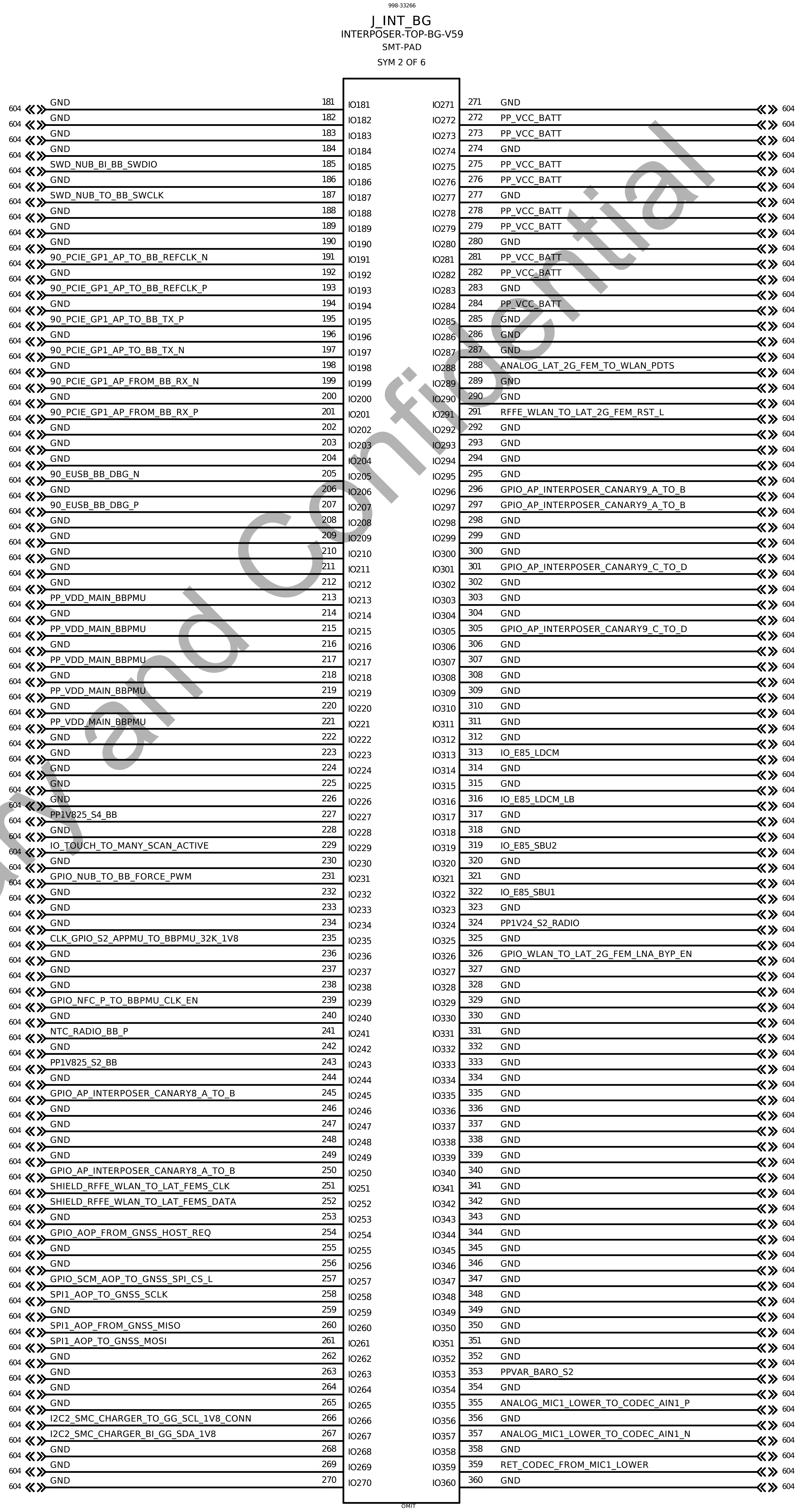
998-33266
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INTERPOSER-TOP-BG-V59
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604 GND 240 IO240
604 NTC_RADIO_BB_P 241 IO241
604 GND 242 IO242
604 PP1V825_S2_BB 243 IO243
604 GND 244 IO244
604 GPIO_AP_INTERPOSER_CANARY8_A_TO_B 245 IO245
604 GND 246 IO246
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604 GND 249 IO249
604 GPIO_AP_INTERPOSER_CANARY8_A_TO_B 250 IO250
604 SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK 251 IO251
604 SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA 252 IO252
604 GND 253 IO253
604 GPIO_AOP_FROM_GNSS_HOST_REQ 254 IO254
604 GND 255 IO255
604 GND 256 IO256
604 GPIO_SCM_AOP_TO_GNSS_SPI_CS_L 257 IO257
604 SPI1_AOP_TO_GNSS_SCLK 258 IO258
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604 SPI1_AOP_FROM_GNSS_MISO 260 IO260
604 SPI1_AOP_TO_GNSS_MOSI 261 IO261
604 GND 262 IO262
604 GND 263 IO263
604 GND 264 IO264
604 GND 265 IO265
604 I2C2_SMC_CHARGER_TO_GG_SCL_1V8_CONN 266 IO266
604 I2C2_SMC_CHARGER_BI_GG_SDA_1V8 267 IO267
604 GND 268 IO268
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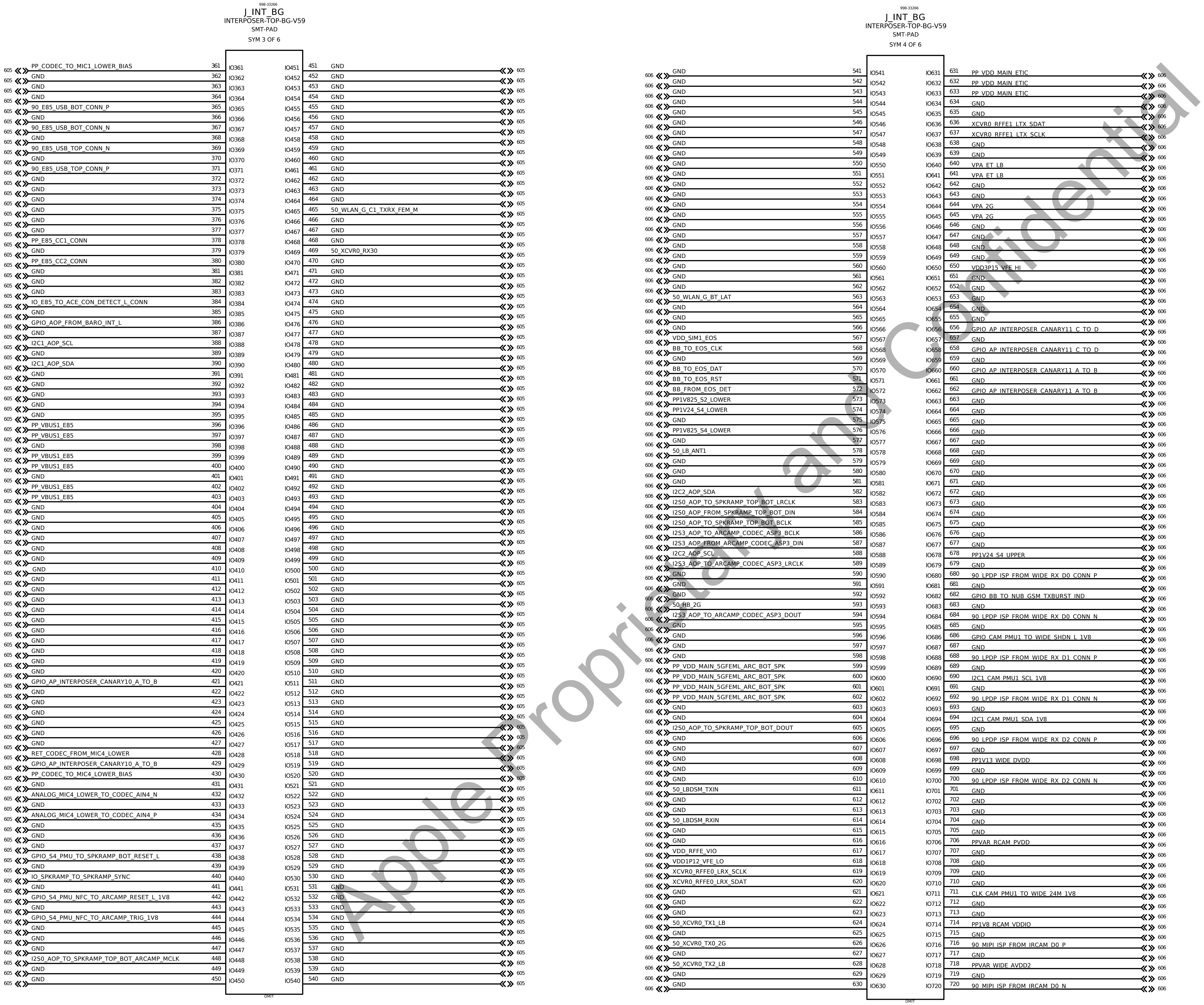

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605	PP_CODEC_TO_MIC1_LOWER_BIAS	361	IO361	IO451	451	GND	605
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605	GND	363	IO363	IO453	453	GND	605
605	GND	364	IO364	IO454	454	GND	605
605	90_E85_USB_BOT_CONN_P	365	IO365	IO455	455	GND	605
605	GND	366	IO366	IO456	456	GND	605
605	90_E85_USB_BOT_CONN_N	367	IO367	IO457	457	GND	605
605	GND	368	IO368	IO458	458	GND	605
605	90_E85_USB_TOP_CONN_N	369	IO369	IO459	459	GND	605
605	GND	370	IO370	IO460	460	GND	605
605	90_E85_USB_TOP_CONN_P	371	IO371	IO461	461	GND	605
605	GND	372	IO372	IO462	462	GND	605
605	GND	373	IO373	IO463	463	GND	605
605	GND	374	IO374	IO464	464	GND	605
605	GND	375	IO375	IO465	465	50_WLAN_G_C1_TXRX_FEM_M	605
605	GND	376	IO376	IO466	466	GND	605
605	GND	377	IO377	IO467	467	GND	605
605	PP_E85_CC1_CONN	378	IO378	IO468	468	GND	605
605	GND	379	IO379	IO469	469	50_XCVR0_RX30	605
605	PP_E85_CC2_CONN	380	IO380	IO470	470	GND	605
605	GND	381	IO381	IO471	471	GND	605
605	GND	382	IO382	IO472	472	GND	605
605	GND	383	IO383	IO473	473	GND	605
605	IO_E85_TO_ACE_CON_DETECT_L_CONN	384	IO384	IO474	474	GND	605
605	GND	385	IO385	IO475	475	GND	605
605	GPIO_AOP_FROM_BARO_INT_L	386	IO386	IO476	476	GND	605
605	GND	387	IO387	IO477	477	GND	605
605	I2C1_AOP_SCL	388	IO388	IO478	478	GND	605
605	GND	389	IO389	IO479	479	GND	605
605	I2C1_AOP_SDA	390	IO390	IO480	480	GND	605
605	GND	391	IO391	IO481	481	GND	605
605	GND	392	IO392	IO482	482	GND	605
605	GND	393	IO393	IO483	483	GND	605
605	GND	394	IO394	IO484	484	GND	605
605	GND	395	IO395	IO485	485	GND	605
605	PP_VBUS1_E85	396	IO396	IO486	486	GND	605
605	PP_VBUS1_E85	397	IO397	IO487	487	GND	605
605	GND	398	IO398	IO488	488	GND	605
605	PP_VBUS1_E85	399	IO399	IO489	489	GND	605
605	PP_VBUS1_E85	400	IO400	IO490	490	GND	605
605	GND	401	IO401	IO491	491	GND	605
605	PP_VBUS1_E85	402	IO402	IO492	492	GND	605
605	PP_VBUS1_E85	403	IO403	IO493	493	GND	605
605	GND	404	IO404	IO494	494	GND	605
605	GND	405	IO405	IO495	495	GND	605
605	GND	406	IO406	IO496	496	GND	605
605	GND	407	IO407	IO497	497	GND	605
605	GND	408	IO408	IO498	498	GND	605
605	GND	409	IO409	IO499	499	GND	605
605	GND	410	IO410	IO500	500	GND	605
605	GND	411	IO411	IO501	501	GND	605
605	GND	412	IO412	IO502	502	GND	605
605	GND	413	IO413	IO503	503	GND	605
605	GND	414	IO414	IO504	504	GND	605
605	GND	415	IO415	IO505	505	GND	605
605	GND	416	IO416	IO506	506	GND	605
605	GND	417	IO417	IO507	507	GND	605
605	GND	418	IO418	IO508	508	GND	605
605	GND	419	IO419	IO509	509	GND	605
605	GND	420	IO420	IO510	510	GND	605
605	GPIO_AP_INTERPOSER_CANARY10_A_TO_B	421	IO421	IO511	511	GND	605
605	GND	422	IO422	IO512	512	GND	605
605	GND	423	IO423	IO513	513	GND	605
605	GND	424	IO424	IO514	514	GND	605
605	GND	425	IO425	IO515	515	GND	605
605	GND	426	IO426	IO516	516	GND	605
605	GND	427	IO427	IO517	517	GND	605
605	RET_CODEC_FROM_MIC4_LOWER	428	IO428	IO518	518	GND	605
605	GPIO_AP_INTERPOSER_CANARY10_A_TO_B	429	IO429	IO519	519	GND	605
605	PP_CODEC_TO_MIC4_LOWER_BIAS	430	IO430	IO520	520	GND	605
605	GND	431	IO431	IO521	521	GND	605
605	ANALOG_MIC4_LOWER_TO_CODEC_AIN4_N	432	IO432	IO522	522	GND	605
605	GND	433	IO433	IO523	523	GND	605
605	ANALOG_MIC4_LOWER_TO_CODEC_AIN4_P	434	IO434	IO524	524	GND	605
605	GND	435	IO435	IO525	525	GND	605
605	GND	436	IO436	IO526	526	GND	605
605	GND	437	IO437	IO527	527	GND	605
605	GPIO_S4_PMU_TO_SPKRAMP_BOT_RESET_L	438	IO438	IO528	528	GND	605
605	GND	439	IO439	IO529	529	GND	605
605	IO_SPKRAMP_TO_SPKRAMP_SYNC	440	IO440	IO530	530	GND	605
605	GND	441	IO441	IO531	531	GND	605
605	GPIO_S4_PMU_NFC_TO_ARCAMP_RESET_L_1V8	442	IO442	IO532	532	GND	605
605	GND	443	IO443	IO533	533	GND	605
605	GPIO_S4_PMU_NFC_TO_ARCAMP_TRIG_1V8	444	IO444	IO534	534	GND	605
605	GND	445	IO445	IO535	535	GND	605
605	GND	446	IO446	IO536	536	GND	605
605	GND	447	IO447	IO537	537	GND	605
605	I2S0_AOP_TO_SPKRAMP_TOP_BOT_ARCAMP_MCLK	448	IO448	IO538	538	GND	605
605	GND	449	IO449	IO539	539	GND	605
605	GND	450	IO450	IO540	540	GND	605

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606	GND	543	IO543	IO633	633	PP_VDD_MAIN_ETIC	606
606	GND	544	IO544	IO634	634	GND	606
606	GND	545	IO545	IO635	635	GND	606
606	GND	546	IO546	IO636	636	XCVR0_RFFE1_LTX_SDAT	606
606	GND	547	IO547	IO637	637	XCVR0_RFFE1_LTX_SCLK	606
606	GND	548	IO548	IO638	638	GND	606
606	GND	549	IO549	IO639	639	GND	606
606	GND	550	IO550	IO640	640	VPA_ET_LB	606
606	GND	551	IO551	IO641	641	VPA_ET_LB	606
606	GND	552	IO552	IO642	642	GND	606
606	GND	553	IO553	IO643	643	GND	606
606	GND	554	IO554	IO644	644	VPA_2G	606
606	GND	555	IO555	IO645	645	VPA_2G	606
606	GND	556	IO556	IO646	646	GND	606
606	GND	557	IO557	IO647	647	GND	606
606	GND	558	IO558	IO648	648	GND	606
606	GND	559	IO559	IO649	649	GND	606
606	GND	560	IO560	IO650	650	VDD3P15_VFE_HI	606
606	GND	561	IO561	IO651	651	GND	606
606	GND	562	IO562	IO652	652	GND	606
606	50_WLAN_G_BT_LAT	563	IO563	IO653	653	GND	606
606	GND	564	IO564	IO654	654	GND	606
606	GND	565	IO565	IO655	655	GND	606
606	GND	566	IO566	IO656	656	GPIO_AP_INTERPOSER_CANARY11_C_TO_D	606
606	VDD_SIM1_EOS	567	IO567	IO657	657	GND	606
606	BB_TO_EOS_CLK	568	IO568	IO658	658	GPIO_AP_INTERPOSER_CANARY11_C_TO_D	606
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606	BB_TO_EOS_DAT	570	IO570	IO660	660	GPIO_AP_INTERPOSER_CANARY11_A_TO_B	606
606	BB_TO_EOS_RST	571	IO571	IO661	661	GND	606
606	BB_FROM_EOS_DET	572	IO572	IO662	662	GPIO_AP_INTERPOSER_CANARY11_A_TO_B	606
606	PP1V825_S2_LOWER	573	IO573	IO663	663	GND	606
606	PP1V24_S4_LOWER	574	IO574	IO664	664	GND	606
606	GND	575	IO575	IO665	665	GND	606
606	PP1V825_S4_LOWER	576	IO576	IO666	666	GND	606
606	GND	577	IO577	IO667	667	GND	606
606	50_LB_ANT1	578	IO578	IO668	668	GND	606
606	GND	579	IO579	IO669	669	GND	606
606	GND	580	IO580	IO670	670	GND	606
606	GND	581	IO581	IO671	671	GND	606
606	I2C2_AOP_SDA	582	IO582	IO672	672	GND	606
606	I2S0_AOP_TO_SPKRAMP_TOP_BOT_LRCLK	583	IO583	IO673	673	GND	606
606	I2S0_AOP_FROM_SPKRAMP_TOP_BOT_DIN	584	IO584	IO674	674	GND	606
606	I2S0_AOP_TO_SPKRAMP_TOP_BOT_BCLK	585	IO585	IO675	675	GND	606
606	I2S3_AOP_TO_ARCAMP_CODEC_ASP3_BCLK	586	IO586	IO676	676	GND	606
606	I2S3_AOP_FROM_ARCAMP_CODEC_ASP3_DIN	587	IO587	IO677	677	GND	606
606	I2C2_AOP_SCL	588	IO588	IO678	678	PP1V24_S4_UPPER	606
606	I2S3_AOP_TO_ARCAMP_CODEC_ASP3_LRCLK	589	IO589	IO679	679	GND	606
606	GND	590	IO590	IO680	680	90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_P	606
606	GND	591	IO591	IO681	681	GND	606
606	GND	592	IO592	IO682	682	GPIO_BB_TO_NUB_GSM_TXBURST_IND	606
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606	I2S3_AOP_TO_ARCAMP_CODEC_ASP3_DOUT	594	IO594	IO684	684	90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_N	606
606	GND	595	IO595	IO685	685	GND	606
606	GND	596	IO596	IO686	686	GPIO_CAM_PMU1_TO_WIDE_SHDN_L_1V8	606
606	GND	597	IO597	IO687	687	GND	606
606	GND	598	IO598	IO688	688	90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_P	606
606	PP_VDD_MAIN_5GFEML_ARC_BOT_SPK	599	IO599	IO689	689	GND	606
606	PP_VDD_MAIN_5GFEML_ARC_BOT_SPK	600	IO600	IO690	690	I2C1_CAM_PMU1_SCL_1V8	606
606	PP_VDD_MAIN_5GFEML_ARC_BOT_SPK	601	IO601	IO691	691	GND	606
606	PP_VDD_MAIN_5GFEML_ARC_BOT_SPK	602	IO602	IO692	692	90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_N	606
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606	GND	607	IO607	IO697	697	GND	606
606	GND	608	IO608	IO698	698	PP1V13_WIDE_DVDD	606
606	GND	609	IO609	IO699	699	GND	606
606	GND	610	IO610	IO700	700	90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_N	606
606	50_LBDSM_TXIN	611	IO611	IO701	701	GND	606
606	GND	612	IO612	IO702	702	GND	606
606	GND	613	IO613	IO703	703	GND	606
606	50_LBDSM_RXIN	614	IO614	IO704	704	GND	606
606	GND	615	IO615	IO705	705	GND	606
606	GND	616	IO616	IO706	706	PPVAR_RCAM_PVDD	606
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606	XCVR0_RFFE0_LRX_SDAT	620	IO620	IO710	710	GND	606
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606	GND	623	IO623	IO713	713	GND	606
606	50_XCVR0_TX1_LB	624	IO624	IO714	714	PP1V8_RCAM_VDDIO	606
606	GND	625	IO625	IO715	715	GND	606
606	50_XCVR0_TX0_2G	626	IO626	IO716	716	90_MIPI_ISP_FROM_IRCAM_D0_P	606
606	GND	627	IO627	IO717	717	GND	606
606	50_XCVR0_TX2_LB	628	IO628	IO718	718	PPVAR_WIDE_AVDD2	606
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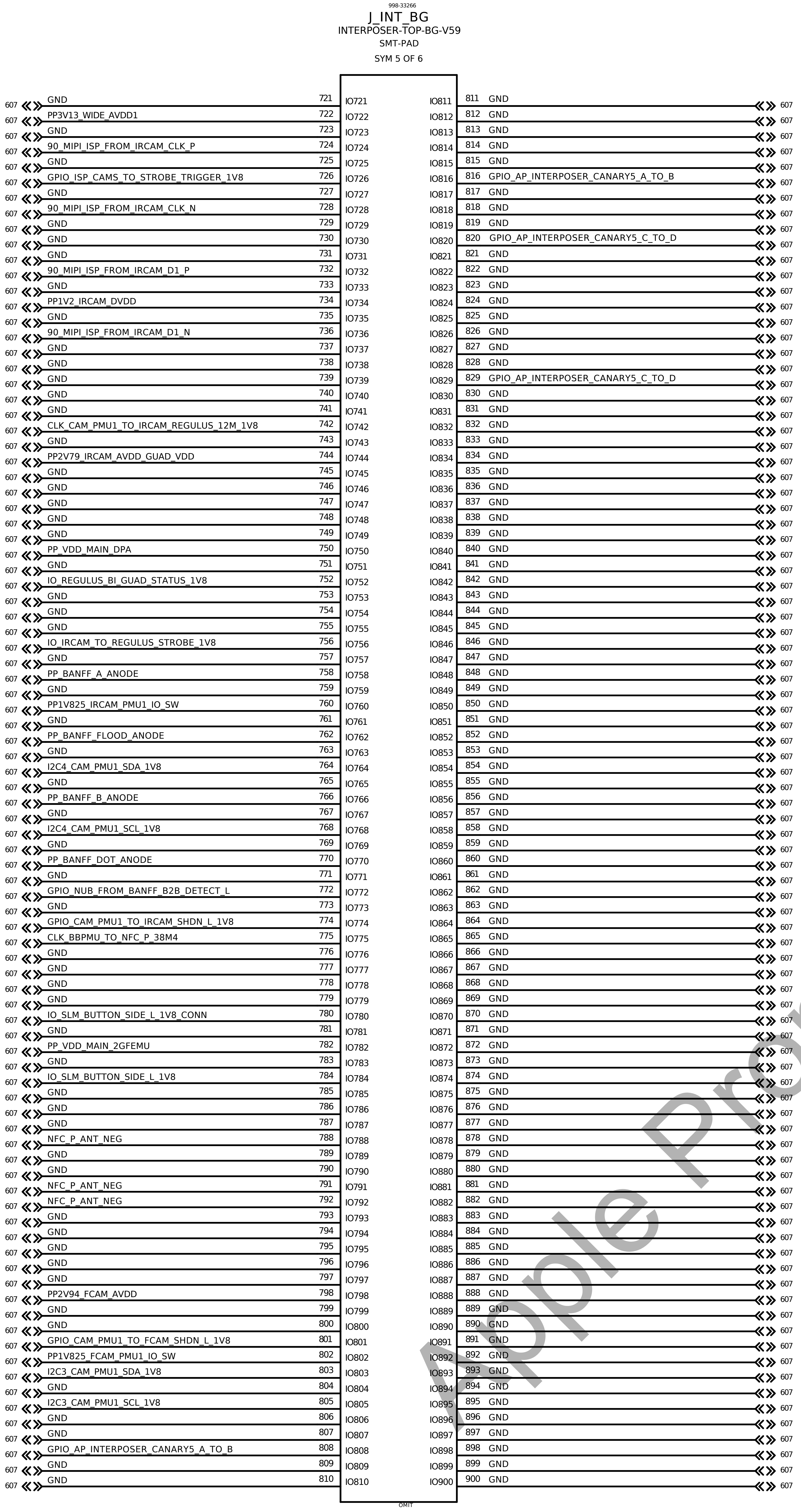
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607 GND 743 IO743
607 PP2V79_IRCAM_AVDD_GUAD_VDD 744 IO744
607 GND 745 IO745
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607 PP_VDD_MAIN_DPA 750 IO750
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607 I2C4_CAM_PMU1_SCL_1V8 768 IO768
607 GND 769 IO769
607 PP_BANFF_DOT_ANODE 770 IO770
607 GND 771 IO771
607 GPIO_NUB_FROM_BANFF_B2B_DETECT_L 772 IO772
607 GND 773 IO773
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607 CLK_BBPMU_TO_NFC_P_38M4 775 IO775
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607 IO_SLM_BUTTON_SIDE_L_1V8 784 IO784
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607 PP2V94_FCAM_AVDD 798 IO798
607 GND 799 IO799
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607 GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8 801 IO801
607 PP1V825_FCAM_PMU1_IO_SW 802 IO802
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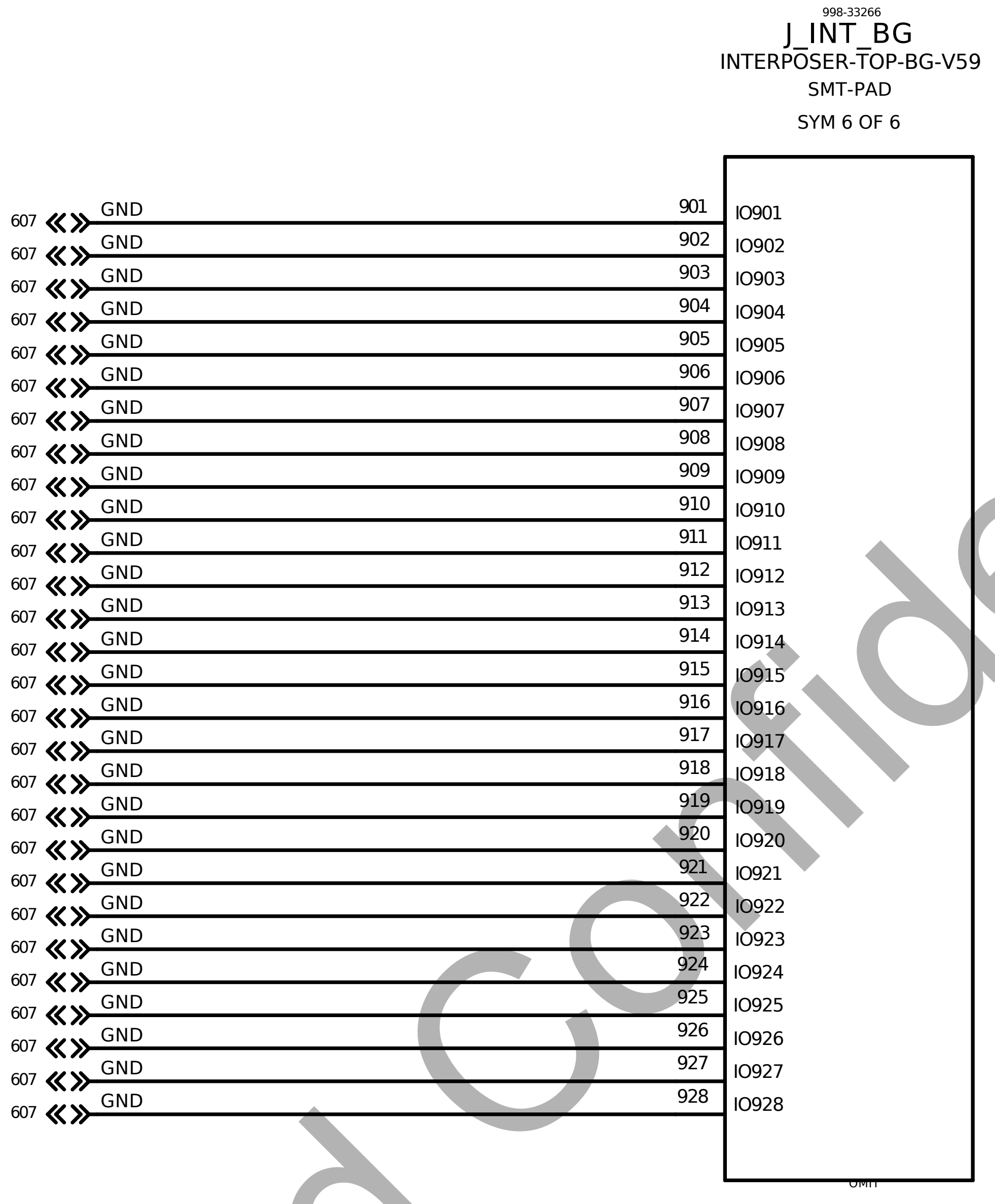
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600	GND	GND	603 604 605 606 607
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600	GND	GND	603 604 605 606 607
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600	PAC_WLCHGR_COIL2	PAC_WLCHGR_COIL2	105 327 603
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600	GND	GND	603 604 605 606 607
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600	GND	GND	603 604 605 606 607
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600	GND	GND	603 604 605 606 607
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600	GND	GND	603 604 605 606 607
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600	GND	GND	603 604 605 606 607
600	SWD_NUB_BI_BB_SWDIO	SWD_NUB_BI_BB_SWDIO	342
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600	GND	GND	603 604 605 606 607
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600	GND	GND	603 604 605 606 607
600	PP_VCC_BATT	PP_VCC_BATT	104 604
600	PP_VCC_BATT	PP_VCC_BATT	104 604
600	GND	GND	603 604 605 606 607
600	PP_VCC_BATT	PP_VCC_BATT	104 604
600	PP_VCC_BATT	PP_VCC_BATT	104 604
600	GND	GND	603 604 605 606 607
600	PP_VCC_BATT	PP_VCC_BATT	104 604
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600	GND	GND	603 604 605 606 607
600	GND	GND	603 604 605 606 607
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600	GND	GND	603 604 605 606 607
600	GND	GND	603 604 605 606 607
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600	GND	GND	603 604 605 606 607
600	GPIO_AP_INTERPOSER_CANARY9_C_TO_D	GPIO_AP_INTERPOSER_CANARY9_C_TO_D	604
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600	GND	GND	603 604 605 606 607
600	GND	GND	603 604 605 606 607
600	GPIO_AP_INTERPOSER_CANARY9_C_TO_D	GPIO_AP_INTERPOSER_CANARY9_C_TO_D	604
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600	GND	GND	603 604 605 606 607
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600	IO_E85_LDCM_LB	IO_E85_LDCM_LB	113
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601	GND	GND	603 604 605 606 607
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601	GND	GND	603 604 605 606 607
601	90_E85_USB_BOT_CONN_N	90_E85_USB_BOT_CONN_N	113
601	GND	GND	603 604 605 606 607
601	90_E85_USB_TOP_CONN_N	90_E85_USB_TOP_CONN_N	113
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601	90_E85_USB_TOP_CONN_P	90_E85_USB_TOP_CONN_P	113
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601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
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601	GND	GND	603 604 605 606 607
601	PP_E85_CC1_CONN	PP_E85_CC1_CONN	113
601	GND	GND	603 604 605 606 607
601	PP_E85_CC2_CONN	PP_E85_CC2_CONN	113
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601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	IO_E85_TO_ACE_CON_DETECT_L_CONN	IO_E85_TO_ACE_CON_DETECT_L_CONN	113
601	GND	GND	603 604 605 606 607
601	GPIO_AOP_FROM_BARO_INT_L	GPIO_AOP_FROM_BARO_INT_L	113
601	GND	GND	603 604 605 606 607
601	I2C1_AOP_SCL	I2C1_AOP_SCL	141
601	GND	GND	603 604 605 606 607
601	I2C1_AOP_SDA	I2C1_AOP_SDA	141
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601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	PP_VBUS1_E85	PP_VBUS1_E85	113 605
601	PP_VBUS1_E85	PP_VBUS1_E85	113 605
601	GND	GND	603 604 605 606 607
601	PP_VBUS1_E85	PP_VBUS1_E85	113 605
601	PP_VBUS1_E85	PP_VBUS1_E85	113 605
601	GND	GND	603 604 605 606 607
601	PP_VBUS1_E85	PP_VBUS1_E85	113 605
601	PP_VBUS1_E85	PP_VBUS1_E85	113 605
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601	GPIO_AP_INTERPOSER_CANARY10_A_TO_B	GPIO_AP_INTERPOSER_CANARY10_A_TO_B	605
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601	GND	GND	603 604 605 606 607
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601	GND	GND	603 604 605 606 607
601	RET_CODEC_FROM_MIC4_LOWER	RET_CODEC_FROM_MIC4_LOWER	113
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601	GND	GND	603 604 605 606 607
601	ANALOG_MIC4_LOWER_TO_CODEC_AIN4_P	ANALOG_MIC4_LOWER_TO_CODEC_AIN4_P	113
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601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	GPIO_S4_PMU_TO_SPKRAMP_BOT_RESET_L	GPIO_S4_PMU_TO_SPKRAMP_BOT_RESET_L	80
601	GND	GND	603 604 605 606 607
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601	GND	GND	603 604 605 606 607
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601	GPIO_AP_INTERPOSER_CANARY11_C_TO_D	GPIO_AP_INTERPOSER_CANARY11_C_TO_D	606
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601	GPIO_AP_INTERPOSER_CANARY11_C_TO_D	GPIO_AP_INTERPOSER_CANARY11_C_TO_D	606
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601	GPIO_AP_INTERPOSER_CANARY11_A_TO_B	GPIO_AP_INTERPOSER_CANARY11_A_TO_B	606
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601	PP1V24_S4_UPPER	PP1V24_S4_UPPER	343
601	GND	GND	603 604 605 606 607
601	90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_P	90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_P	106
601	GND	GND	603 604 605 606 607
601	GPIO_BB_TO_NUB_GSM_TXBURST_IND	GPIO_BB_TO_NUB_GSM_TXBURST_IND	342
601	GND	GND	603 604 605 606 607
601	90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_N	90_LPDP_ISP_FROM_WIDE_RX_D0_CONN_N	106
601	GND	GND	603 604 605 606 607
601	GPIO_CAM_PMU1_TO_WIDE_SHDN_L_1V8	GPIO_CAM_PMU1_TO_WIDE_SHDN_L_1V8	106
601	GND	GND	603 604 605 606 607
601	90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_P	90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_P	106
601	GND	GND	603 604 605 606 607
601	I2C1_CAM_PMU1_SCL_1V8	I2C1_CAM_PMU1_SCL_1V8	141
601	GND	GND	603 604 605 606 607
601	90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_N	90_LPDP_ISP_FROM_WIDE_RX_D1_CONN_N	106
601	GND	GND	603 604 605 606 607
601	I2C1_CAM_PMU1_SDA_1V8	I2C1_CAM_PMU1_SDA_1V8	141
601	GND	GND	603 604 605 606 607
601	90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_P	90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_P	106
601	GND	GND	603 604 605 606 607
601	PP1V13_WIDE_DVDD	PP1V13_WIDE_DVDD	106
601	GND	GND	603 604 605 606 607
601	90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_N	90_LPDP_ISP_FROM_WIDE_RX_D2_CONN_N	106
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	PPVAR_RCAM_PVDD	PPVAR_RCAM_PVDD	141
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	CLK_CAM_PMU1_TO_WIDE_24M_1V8	CLK_CAM_PMU1_TO_WIDE_24M_1V8	106
601	GND	GND	603 604 605 606 607
601	GND	GND	603 604 605 606 607
601	PP1V8_RCAM_VDDIO	PP1V8_RCAM_VDDIO	141
601	GND	GND	603 604 605 606 607
601	90_MIPI_ISP_FROM_IRCAM_D0_P	90_MIPI_ISP_FROM_IRCAM_D0_P	110
601	GND	GND	603 604 605 606 607
601	PPVAR_WIDE_AVDD2	PPVAR_WIDE_AVDD2	106
601	GND	GND	603 604 605 606 607
601	90_MIPI_ISP_FROM_IRCAM_D0_N	90_MIPI_ISP_FROM_IRCAM_D0_N	110

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602	GND	GND	603 604 605 606 607
602	PP3V13_WIDE_AVDD1	PP3V13_WIDE_AVDD1	106
602	GND	GND	603 604 605 606 607
602	90_MIPI_ISP_FROM_IRCAM_CLK_P	90_MIPI_ISP_FROM_IRCAM_CLK_P	110
602	GND	GND	603 604 605 606 607
602	GPIO_ISP_CAMS_TO_STROBE_TRIGGER_1V8	GPIO_ISP_CAMS_TO_STROBE_TRIGGER_1V8	106
602	GND	GND	603 604 605 606 607
602	90_MIPI_ISP_FROM_IRCAM_CLK_N	90_MIPI_ISP_FROM_IRCAM_CLK_N	110
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	90_MIPI_ISP_FROM_IRCAM_D1_P	90_MIPI_ISP_FROM_IRCAM_D1_P	110
602	GND	GND	603 604 605 606 607
602	PP1V2_IRCAM_DVDD	PP1V2_IRCAM_DVDD	110
602	GND	GND	603 604 605 606 607
602	90_MIPI_ISP_FROM_IRCAM_D1_N	90_MIPI_ISP_FROM_IRCAM_D1_N	110
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8	CLK_CAM_PMU1_TO_IRCAM_REGULUS_12M_1V8	110
602	GND	GND	603 604 605 606 607
602	PP2V79_IRCAM_AVDD_GUAD_VDD	PP2V79_IRCAM_AVDD_GUAD_VDD	110
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	PP_VDD_MAIN_DPA	PP_VDD_MAIN_DPA	342
602	GND	GND	603 604 605 606 607
602	IO_REGULUS_BI_GUAD_STATUS_1V8	IO_REGULUS_BI_GUAD_STATUS_1V8	110
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	IO_IRCAM_TO_REGULUS_STROBE_1V8	IO_IRCAM_TO_REGULUS_STROBE_1V8	110
602	GND	GND	603 604 605 606 607
602	PP_BANFF_A_ANODE	PP_BANFF_A_ANODE	110
602	GND	GND	603 604 605 606 607
602	PP1V825_IRCAM_PMU1_IO_SW	PP1V825_IRCAM_PMU1_IO_SW	110
602	GND	GND	603 604 605 606 607
602	PP_BANFF_FLOOD_ANODE	PP_BANFF_FLOOD_ANODE	110
602	GND	GND	603 604 605 606 607
602	I2C4_CAM_PMU1_SDA_1V8	I2C4_CAM_PMU1_SDA_1V8	110 141
602	GND	GND	603 604 605 606 607
602	PP_BANFF_B_ANODE	PP_BANFF_B_ANODE	110
602	GND	GND	603 604 605 606 607
602	I2C4_CAM_PMU1_SCL_1V8	I2C4_CAM_PMU1_SCL_1V8	110 141
602	GND	GND	603 604 605 606 607
602	PP_BANFF_DOT_ANODE	PP_BANFF_DOT_ANODE	110
602	GND	GND	603 604 605 606 607
602	GPIO_NUB_FROM_BANFF_B2B_DETECT_L	GPIO_NUB_FROM_BANFF_B2B_DETECT_L	110
602	GND	GND	603 604 605 606 607
602	GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8	GPIO_CAM_PMU1_TO_IRCAM_SHDN_L_1V8	110
602	CLK_BBPMU_TO_NFC_P_38M4	CLK_BBPMU_TO_NFC_P_38M4	342
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	IO_SLM_BUTTON_SIDE_L_1V8_CONN	IO_SLM_BUTTON_SIDE_L_1V8_CONN	121
602	GND	GND	603 604 605 606 607
602	PP_VDD_MAIN_2GFEMU	PP_VDD_MAIN_2GFEMU	343
602	GND	GND	603 604 605 606 607
602	IO_SLM_BUTTON_SIDE_L_1V8	IO_SLM_BUTTON_SIDE_L_1V8	121
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	NFC_P_ANT_NEG	NFC_P_ANT_NEG	121 342 607
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602	GND	GND	603 604 605 606 607
602	NFC_P_ANT_NEG	NFC_P_ANT_NEG	121 342 607
602	NFC_P_ANT_NEG	NFC_P_ANT_NEG	121 342 607
602	GND	GND	603 604 605 606 607
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602	GND	GND	603 604 605 606 607
602	PP2V94_FCAM_AVDD	PP2V94_FCAM_AVDD	109
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602	GND	GND	603 604 605 606 607
602	GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8	GPIO_CAM_PMU1_TO_FCAM_SHDN_L_1V8	109
602	PP1V825_FCAM_PMU1_IO_SW	PP1V825_FCAM_PMU1_IO_SW	109
602	I2C3_CAM_PMU1_SDA_1V8	I2C3_CAM_PMU1_SDA_1V8	141
602	GND	GND	603 604 605 606 607
602	I2C3_CAM_PMU1_SCL_1V8	I2C3_CAM_PMU1_SCL_1V8	141
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GPIO_AP_INTERPOSER_CANARY5_A_TO_B	GPIO_AP_INTERPOSER_CANARY5_A_TO_B	607
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602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607
602	GND	GND	603 604 605 606 607

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APPD
DATE
2024-09-17

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2	2	NFC_IO		
3	75	NFC_P_FE		

DRAWING TITLE
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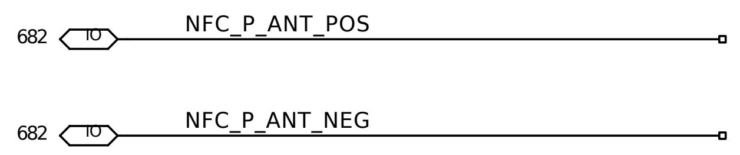
REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
6	0058492950	ENGINEERING RELEASED	2024-09-17

HIER_NFC_BG

IO PORTS

PRIMARY NFC RF



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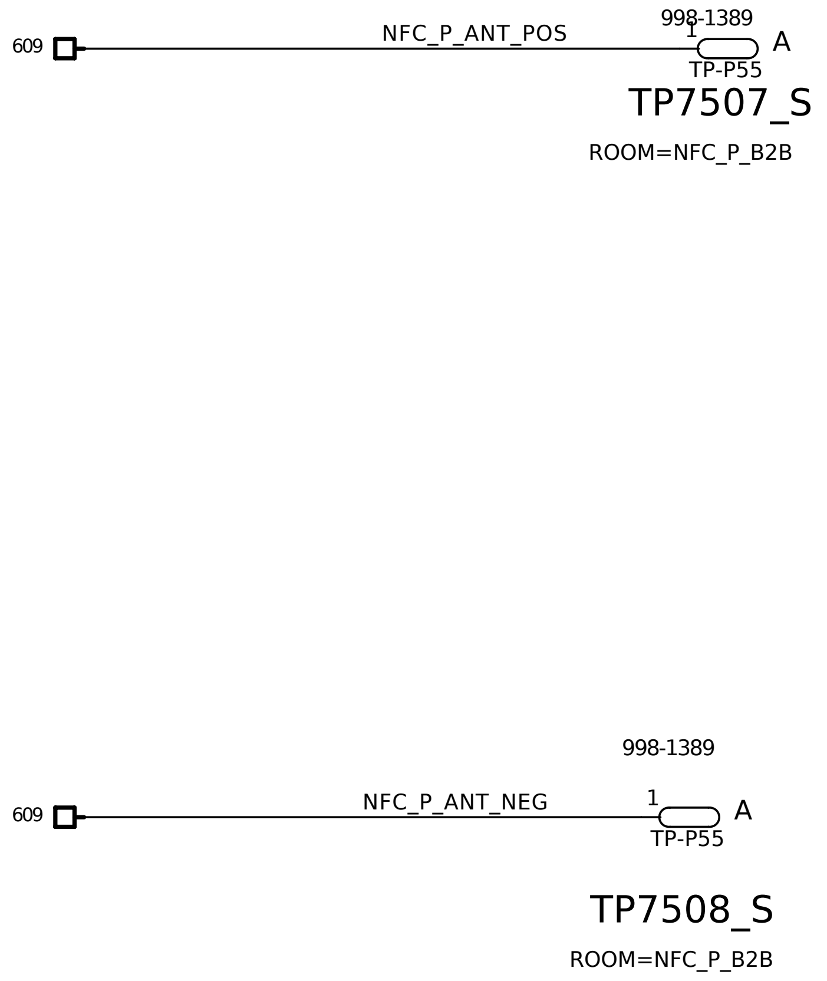
PRIMARY NFC FRONT END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TP-P55
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NFC_P_FE (75)

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5	5	THELONIOUS		
6	6	5G rFEM (UAT)		
7	7	5G rFEM (LAT)		
8	8	2G4 rFEM (UAT)		
9	9	2G4 rFEM (LAT)		

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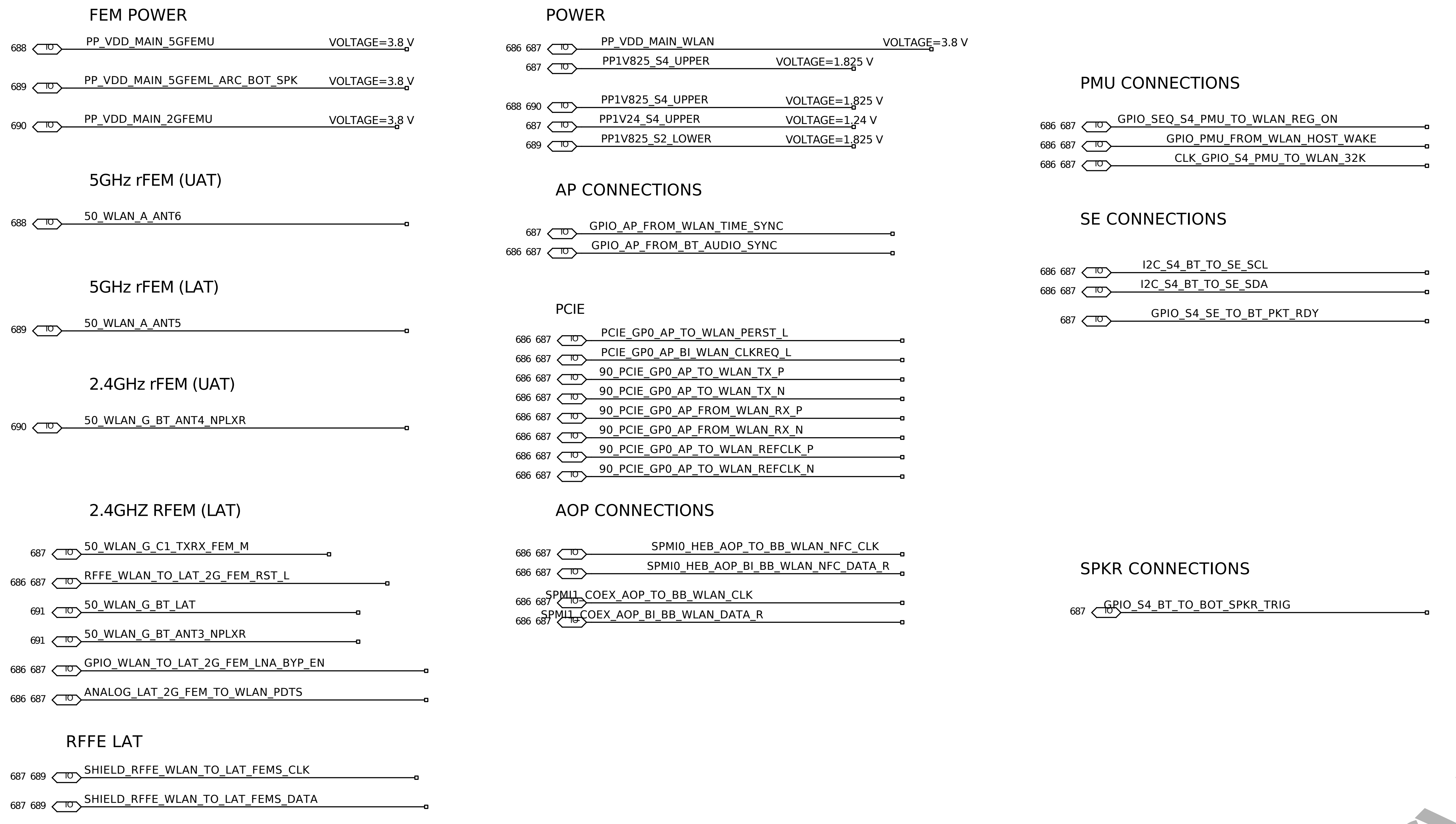
WLAN SYMBOL IO PORTS


FEM POWER
688 IO PP_VDD_MAIN_5GFEMU VOLTAGE=3.8 V
689 IO PP_VDD_MAIN_5GFEML_ARC_BOT_SPK VOLTAGE=3.8 V
690 IO PP_VDD_MAIN_2GFEMU VOLTAGE=3.8 V
5GHz rFEM (UAT)
688 IO 50_WLAN_A_ANT6
5GHz rFEM (LAT)
689 IO 50_WLAN_A_ANT5
2.4GHz rFEM (UAT)
690 IO 50_WLAN_G_BT_ANT4_NPLXR
2.4GHZ RFEM (LAT)
687 IO 50_WLAN_G_C1_TXRX_FEM_M
686 687 IO RFFE_WLAN_TO_LAT_2G_FEM_RST_L
691 IO 50_WLAN_G_BT_LAT
691 IO 50_WLAN_G_BT_ANT3_NPLXR
686 687 IO GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN
686 687 IO ANALOG_LAT_2G_FEM_TO_WLAN_PDTS
RFFE LAT
687 689 IO SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK
687 689 IO SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA
POWER
686 687 IO PP_VDD_MAIN_WLAN VOLTAGE=3.8 V
687 IO PP1V825_S4_UPPER VOLTAGE=1.825 V
688 690 IO PP1V825_S4_UPPER VOLTAGE=1.825 V
687 IO PP1V24_S4_UPPER VOLTAGE=1.24 V
689 IO PP1V825_S2_LOWER VOLTAGE=1.825 V
AP CONNECTIONS
687 IO GPIO_AP_FROM_WLAN_TIME_SYNC
686 687 IO GPIO_AP_FROM_BT_AUDIO_SYNC
PCIE
686 687 IO PCIE_GP0_AP_TO_WLAN_PERST_L
686 687 IO PCIE_GP0_AP_BI_WLAN_CLKREQ_L
686 687 IO 90_PCIE_GP0_AP_TO_WLAN_TX_P
686 687 IO 90_PCIE_GP0_AP_TO_WLAN_TX_N
686 687 IO 90_PCIE_GP0_AP_FROM_WLAN_RX_P
686 687 IO 90_PCIE_GP0_AP_FROM_WLAN_RX_N
686 687 IO 90_PCIE_GP0_AP_TO_WLAN_REFCLK_P
686 687 IO 90_PCIE_GP0_AP_TO_WLAN_REFCLK_N
AOP CONNECTIONS
686 687 IO SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
686 687 IO SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA_R
686 687 IO SPMI1_COEX_AOP_TO_BB_WLAN_CLK
686 687 IO SPMI1_COEX_AOP_BI_BB_WLAN_DATA_R
PMU CONNECTIONS
686 687 IO GPIO_SEQ_S4_PMU_TO_WLAN_REG_ON
686 687 IO GPIO_PMU_FROM_WLAN_HOST_WAKE
686 687 IO CLK_GPIO_S4_PMU_TO_WLAN_32K
SE CONNECTIONS
686 687 IO I2C_S4_BT_TO_SE_SCL
686 687 IO I2C_S4_BT_TO_SE_SDA
687 IO GPIO_S4_SE_TO_BT_PKT_RDY
SPKR CONNECTIONS
687 IO GPIO_S4_BT_TO_BOT_SPKR_TRIG

PAGE TITLE

WLAN SYMBOL IO PORTS (2)

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BOM TABLE

WLAN ALT

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
339S01445	339S01444	U_WLAN_W	STATS ALT PN

BUCK ALT

ALTERNATE PART NO.	PRIMARY PART NO.	REFERENCE DESIGNATORS	COMMENT
138S00024	138S0986	C254_W	TAIYO ALT PART
138S00024	138S0986	C256_W	TAIYO ALT PART
152S01962	152S00750	L253_W,L255_W	TAIYO ALT PART

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BOM Table (3)

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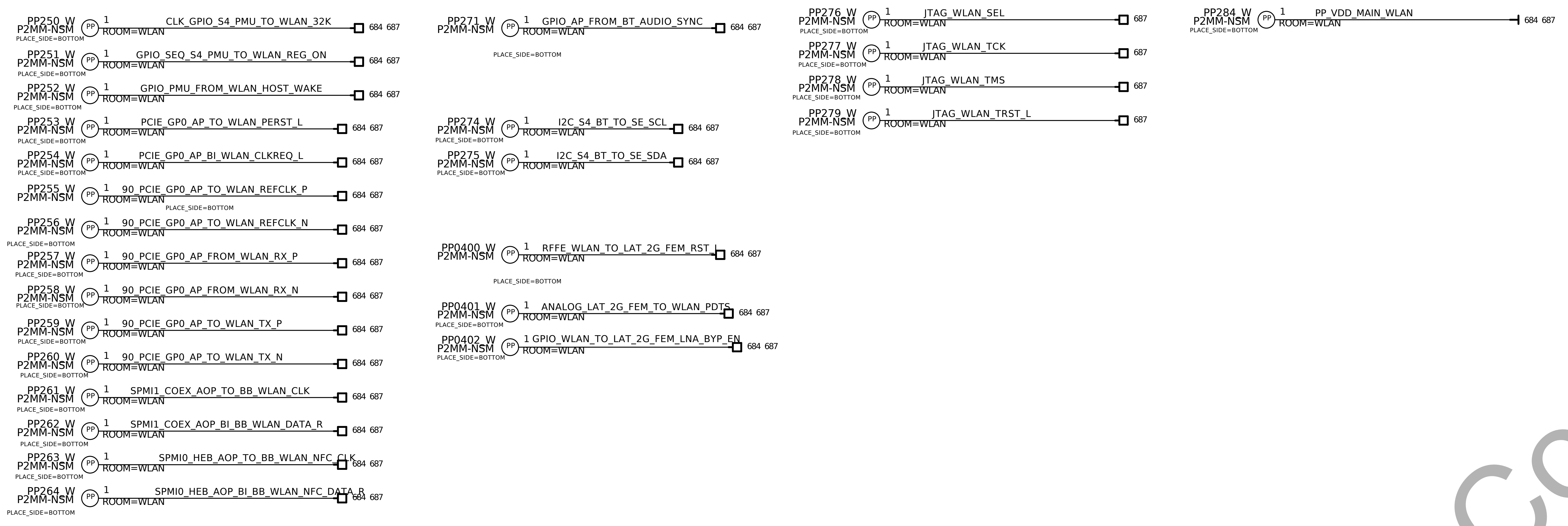
PROBE POINTS


PP250_W P2MM-NSM PP 1 CLK_GPIO_S4_PMU_TO_WLAN_32K ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP251_W P2MM-NSM PP 1 GPIO_SEQ_S4_PMU_TO_WLAN_REG_ON ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP252_W P2MM-NSM PP 1 GPIO_PMU_FROM_WLAN_HOST_WAKE ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP253_W P2MM-NSM PP 1 PCIE_GP0_AP_TO_WLAN_PERST_L ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP254_W P2MM-NSM PP 1 PCIE_GP0_AP_BI_WLAN_CLKREQ_L ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP255_W P2MM-NSM PP 1 90_PCIE_GP0_AP_TO_WLAN_REFCLK_P ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP256_W P2MM-NSM PP 1 90_PCIE_GP0_AP_TO_WLAN_REFCLK_N ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP257_W P2MM-NSM PP 1 90_PCIE_GP0_AP_FROM_WLAN_RX_P ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP258_W P2MM-NSM PP 1 90_PCIE_GP0_AP_FROM_WLAN_RX_N ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP259_W P2MM-NSM PP 1 90_PCIE_GP0_AP_TO_WLAN_TX_P ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP260_W P2MM-NSM PP 1 90_PCIE_GP0_AP_TO_WLAN_TX_N ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP261_W P2MM-NSM PP 1 SPMI1_COEX_AOP_TO_BB_WLAN_CLK ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP262_W P2MM-NSM PP 1 SPMI1_COEX_AOP_BI_BB_WLAN_DATA_R ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP263_W P2MM-NSM PP 1 SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP264_W P2MM-NSM PP 1 SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA_R ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP271_W P2MM-NSM PP 1 GPIO_AP_FROM_BT_AUDIO_SYNC ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP274_W P2MM-NSM PP 1 I2C_S4_BT_TO_SE_SCL ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP275_W P2MM-NSM PP 1 I2C_S4_BT_TO_SE_SDA ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP0400_W P2MM-NSM PP 1 RFFE_WLAN_TO_LAT_2G_FEM_RST_L ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP0401_W P2MM-NSM PP 1 ANALOG_LAT_2G_FEM_TO_WLAN_PDTS ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP0402_W P2MM-NSM PP 1 GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN ROOM=WLAN PLACE_SIDE=BOTTOM 684 687
PP276_W P2MM-NSM PP 1 JTAG_WLAN_SEL ROOM=WLAN PLACE_SIDE=BOTTOM 687
PP277_W P2MM-NSM PP 1 JTAG_WLAN_TCK ROOM=WLAN PLACE_SIDE=BOTTOM 687
PP278_W P2MM-NSM PP 1 JTAG_WLAN_TMS ROOM=WLAN PLACE_SIDE=BOTTOM 687
PP279_W P2MM-NSM PP 1 JTAG_WLAN_TRST_L ROOM=WLAN PLACE_SIDE=BOTTOM 687
PP284_W P2MM-NSM PP 1 PP_VDD_MAIN_WLAN ROOM=WLAN PLACE_SIDE=BOTTOM 684 687

PAGE TITLE
Probe Points (4)

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WIFI/BT

5G INTERSTATE BPFS
PP1V24_S4_UPPER
C250_W 27PF 5% 16V NP0-C0G 01005-1 ROOM=WLAN
VOLTAGE=1.24 V
PP1V825_S4_UPPER
C252_W 27PF
C257_W 27PF
VOLTAGE=1.825 V
PP_VDD_MAIN_WLAN
C232_W 10UF 20% 10V X5R-CERM 0402-8 ROOM=WLAN
C233_W 4.7PF
VOLTAGE=3.8 V
C245_W 10UF
C247_W 2.2UF
C246_W 27PF
L253_W 2.2UH-20%-1.1A-0.293OHM
PART_NUMBER=152S00750
PP1V02_ABUCK_L
VOLTAGE=1.02 V
C254_W 7.5UF
C258_W 0.2PF
PP1V02_ABUCK
L255_W 2.2UH-20%-1.1A-0.293OHM
LX_CSR
PP0V72_CBUCK_L
VOLTAGE=0.72 V
C256_W 7.5UF
PP0V72_CBUCK
LX_ASR
L201_W 0.2NH-+/-0.05NH-1.0A
FL_ISG_U_W ACPF-7350-AP2 LGA
ANT TX/RX GND
L233_W 0.5NH-+/-0.05NH-0.1A
50_WLAN_A_C0_TXRX_FEM_M
50_WLAN_A_C0_TXRX_BPF
50_WLAN_A_C0_TXRX_BPF_R
50_WLAN_A_C0_TXRX
C204_W 0.3PF
C201_W 0.3PF
L203_W 6.2NH-3%-0.3A-0.4OHM
L202_W 1NH-3%-0.35A-0.35OHM
FL_ISG_L_W ACPF-7350-AP2 LGA
R202_W 0
50_WLAN_A_C1_TXRX_FEM_M
50_WLAN_A_C1_TXRX_BPF
50_WLAN_A_C1_TXRX_BPF_R
50_WLAN_A_C1_TXRX
C205_W 0.3PF
C206_W 0.3PF
L235_W 1.1NH-+/-0.1NH-0.85A
C228_W 0.2PF
C241_W 0.2PF
L237_W 0.5NH-+/-0.05NH-0.1A
50_WLAN_G_C0_TXRX_FEM_M
50_WLAN_G_C0_TXRX_R
C230_W 0.2PF
C243_W 0.2PF
L238_W 1.4NH-+/-0.1NH-0.70A
50_WLAN_G_C1_TXRX_FEM_M
50_WLAN_G_C1_TXRX_R
C231_W 0.2PF
C244_W 0.2PF
U_WLAN_W 2103-190107-10 LGA SYM 1 OF 2 339S01444
ANALOG_UAT_5G_FEM_TO_WLAN_PDTS
ANALOG_LAT_5G_FEM_TO_WLAN_PDTS
ANALOG_UAT_2G_FEM_TO_WLAN_PDTS
ANALOG_LAT_2G_FEM_TO_WLAN_PDTS
GPIO_WLAN_TO_UAT_5G_FEM_LNA_BYP_EN
GPIO_WLAN_TO_LAT_5G_FEM_LNA_BYP_EN
GPIO_WLAN_TO_UAT_2G_FEM_LNA_BYP_EN
GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN
RFFE_WLAN_TO_UAT_5G_FEM_RST_L
RFFE_WLAN_TO_UAT_2G_FEM_RST_L
SHIELD_RFFE_WLAN_TO_UAT_FEMS_CLK
SHIELD_RFFE_WLAN_TO_UAT_FEMS_DATA
RFFE_WLAN_TO_LAT_5G_FEM_RST_L
RFFE_WLAN_TO_LAT_2G_FEM_RST_L
SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK
SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA
GPIO_AP_FROM_WLAN_TIME_SYNC
SPMI1_COEX_AOP_TO_BB_WLAN_CLK
SPMI1_COEX_AOP_BI_BB_WLAN_DATA_R
PCIE_GP0_AP_TO_WLAN_PERST_L
PCIE_GP0_AP_BI_WLAN_CLKREQ_L
90_PCIE_GP0_AP_TO_WLAN_TX_P
90_PCIE_GP0_AP_TO_WLAN_TX_N
90_PCIE_GP0_AP_FROM_WLAN_RX_P
90_PCIE_GP0_AP_FROM_WLAN_RX_N
90_PCIE_GP0_AP_TO_WLAN_REFCLK_P
90_PCIE_GP0_AP_TO_WLAN_REFCLK_N
C226_W 27PF
5G_C0_ANT 5GTSSI_C0 5G_C1_ANT 5GTSSI_C1 2G_C0_ANT 2GTSSI_C0 2G_C1_ANT 2GTSSI_C1
LNA_EN_5GC0 LNA_EN_5GC1 LNA_EN_2GC0 LNA_EN_2GC1
5G_C0_RESET 2G_C0_RESET C0_MIPI_CLK C0_MIPI_DATA 5G_C1_RESET 2G_C1_RESET C1_MIPI_CLK C1_MIPI_DATA
WL_GPIO_7/DAP_SEL WL_GPIO_18 WLBT_SECI_IN WLBT_SECI_OUT WLAN_TIME_SYNC LHL_GPIO2 SPMI_IDC_CLK SPMI_IDC_DAT
WLBT_WL_PCIE_PERST_L WLBT_WL_PCIE_CLKREQ_L 90_WLBT_WL_PCIE_RD_P 90_WLBT_WL_PCIE_RD_N 90_WLBT_WL_PCIE_TD_P 90_WLBT_WL_PCIE_TD_N 90_WLBT_WL_PCIE_REFCLK_P 90_WLBT_WL_PCIE_REFCLK_N
RF_SW_CTRL_3 CLK_REQ
VBAT VBAT VBAT_RF VDDIO_RF VDDIO1P8 VDDIO1P8 ASR_VLX ASR_VLX ABUCK_1P02 ABUCK_WL2G_BT_1P02 ABUCK_WL2G_BT_1P02 ABUCK_WL5G_1P02 ABUCK_WL5G_1P02 CSR_VLX CSR_VLX CBUCK_0P72 CBUCK_0P72 CBUCK_0P72 BTLDO3V3
WLBT_WL_FAST_UART_RX WLBT_WL_FAST_UART_RTS_OUT WLBT_WL_FAST_UART_CTS_IN WLBT_WL_FAST_UART_TX WLBT_WL_HOST_WAKE WLBT_WL_REG_ON
WLAN_TDI/CXT_A WLAN_TDO/CXT_B WLAN_TRST_L JTAG_SEL WLAN_SCT/SWD_CLK WLAN_TMS/SWD_DAT
WL_GPIO_21/BT_OVER_UART WLBT_BT_UART_RXD WLBT_BT_UART_RTS_L WLBT_BT_UART_CTS_L WLBT_BT_UART_TXD WLBT_BT_DEV_WAKE WLBT_BT_REG_ON
1V2_WIFI_TO_SENSORA_COEX 1V2_BT_TO_SENSORA_COEX 1V8_WIFI_TO_SENSORA_COEX 1V8_BT_TO_SENSORA_COEX
GPIO_SENSORB_TO_BT_SYNC
SENSORC_TO_WIFI_COEX WIFI_TO_SENSORC_COEX BT_TO_SENSORC_TIME_SYNC BT_TO_SENSORC_WAKE
SOC_TO_BT_TIME_SYNC BT_TO_AP_TIME_SYNC SE_I2C_CLK SE_I2C_DAT SPMI_HEB_CLK SPMI_HEB_DAT WLBT_CLK_32K TCXO_IN
NC
GPIO_PMU_FROM_WLAN_HOST_WAKE
GPIO_SEQ_S4_PMU_TO_WLAN_REG_ON
JTAG_WLAN_TRST_L
JTAG_WLAN_SEL
JTAG_WLAN_TCK
JTAG_WLAN_TMS
GPIO_S4_BT_TO_BOT_SPKR_TRIG
GPIO_S4_SE_TO_BT_PKT_RDY
GPIO_AP_FROM_BT_AUDIO_SYNC
I2C_S4_BT_TO_SE_SCL
I2C_S4_BT_TO_SE_SDA
CKPLUS_WAIVE=I2C_PULLUP
SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA_R
CLK_GPIO_S4_PMU_TO_WLAN_32K
U_WLAN_W 2103-190107-10 LGA SYM 2 OF 2
GND
SENSOR A = DOTARA
SENSOR B = SE
SENSOR C = R1
GPIO_SEQ_S4_PMU_TO_WLAN_REG_ON
R258_W 200K 1% 1/32W TK 01005-1 ROOM=WLAN
GPIO_PMU_FROM_WLAN_HOST_WAKE
R259_W 100K 5% 1/32W TK 01005 ROOM=WLAN
R257_W 10K 5% 1/32W TK 01005-1 ROOM=WLAN
JTAG_WLAN_SEL
STUFFED= JTAG DISABLED

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WiFi/BT (5)

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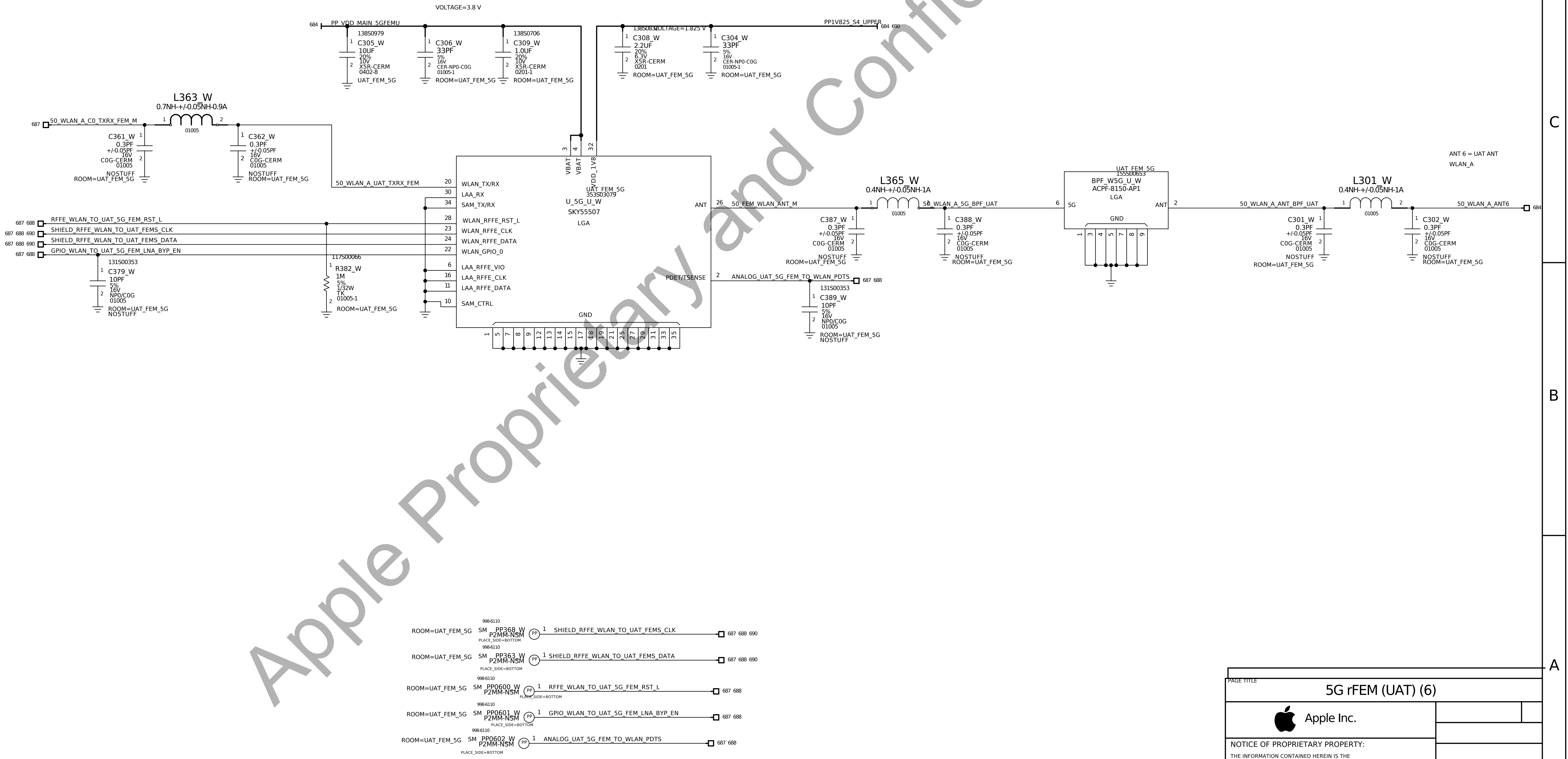
UAT 5GHZ RFEM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138S0979 C305_W 10UF 20% 10V X5R-CERM 0402-8 UAT_FEM_5G
C306_W 33PF 5% 16V CER-NP0-C0G 01005-1 ROOM=UAT_FEM_5G
138S0706 C309_W 1.0UF 20% 10V X5R-CERM 0201-1 ROOM=UAT_FEM_5G
138S0837 VOLTAGE=1.825 V
C308_W 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=UAT_FEM_5G
C304_W 33PF 5% 16V CER-NP0-C0G 01005-1 ROOM=UAT_FEM_5G
PP1V825_S4_UPPER 684 690
L363_W 0.7NH-+/-0.05NH-0.9A 01005
687 50_WLAN_A_C0_TXRX_FEM_M
C361_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM_5G
C362_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM_5G
50_WLAN_A_UAT_TXRX_FEM
687 688 RFFE_WLAN_TO_UAT_5G_FEM_RST_L
687 688 690 SHIELD_RFFE_WLAN_TO_UAT_FEMS_CLK
687 688 690 SHIELD_RFFE_WLAN_TO_UAT_FEMS_DATA
687 688 GPIO_WLAN_TO_UAT_5G_FEM_LNA_BYP_EN
131S00353 C379_W 10PF 5% 16V NP0/C0G 01005 ROOM=UAT_FEM_5G NOSTUFF
117S00066 R382_W 1M 5% 1/32W TK 01005-1 ROOM=UAT_FEM_5G
UAT_FEM_5G 353S03079 U_5G_U_W SKY55507 LGA
VBAT VBAT VDD_1V8
WLAN_TX/RX LAA_RX SAM_TX/RX WLAN_RFFE_RST_L WLAN_RFFE_CLK WLAN_RFFE_DATA WLAN_GPIO_0 LAA_RFFE_VIO LAA_RFFE_CLK LAA_RFFE_DATA SAM_CTRL
ANT PDET/TSENSE GND
26 50_FEM_WLAN_ANT_M
2 ANALOG_UAT_5G_FEM_TO_WLAN_PDTS 687 688
131S00353 C389_W 10PF 5% 16V NP0/C0G 01005 ROOM=UAT_FEM_5G NOSTUFF
L365_W 0.4NH-+/-0.05NH-1A 01005
50_WLAN_A_5G_BPF_UAT
C387_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM_5G
C388_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM_5G
UAT_FEM_5G 155S00653 BPF_W5G_U_W ACPF-8150-AP1 LGA
5G ANT GND
50_WLAN_A_ANT_BPF_UAT
ANT 6 = UAT ANT
WLAN_A
L301_W 0.4NH-+/-0.05NH-1A 01005
50_WLAN_A_ANT6 684
C301_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM_5G
C302_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM_5G
ROOM=UAT_FEM_5G SM 998-6110 PP368_W P2MM-NSM PLACE_SIDE=BOTTOM SHIELD_RFFE_WLAN_TO_UAT_FEMS_CLK 687 688 690
ROOM=UAT_FEM_5G SM 998-6110 PP363_W P2MM-NSM PLACE_SIDE=BOTTOM SHIELD_RFFE_WLAN_TO_UAT_FEMS_DATA 687 688 690
ROOM=UAT_FEM_5G SM 998-6110 PP0600_W P2MM-NSM PLACE_SIDE=BOTTOM RFFE_WLAN_TO_UAT_5G_FEM_RST_L 687 688
ROOM=UAT_FEM_5G SM 998-6110 PP0601_W P2MM-NSM PLACE_SIDE=BOTTOM GPIO_WLAN_TO_UAT_5G_FEM_LNA_BYP_EN 687 688
ROOM=UAT_FEM_5G SM 998-6110 PP0602_W P2MM-NSM PLACE_SIDE=BOTTOM ANALOG_UAT_5G_FEM_TO_WLAN_PDTS 687 688

PAGE TITLE

5G rFEM (UAT) (6)

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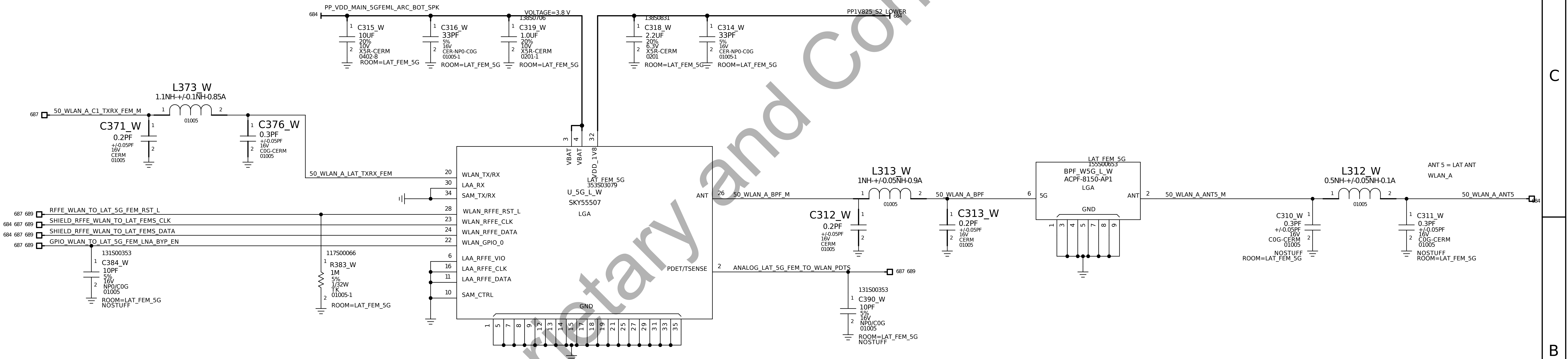
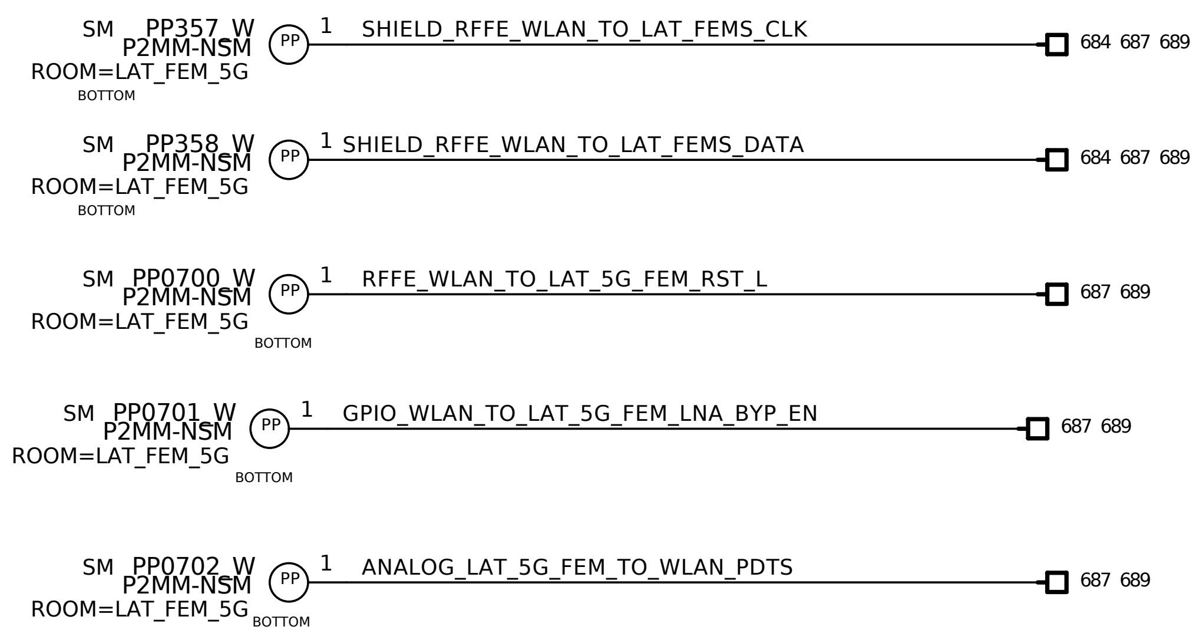
LAT 5GHZ RFEM



PP_VDD_MAIN_5GFEML_ARC_BOT_SPK
684
VOLTAGE=3.8 V
138S0706
C315_W 10UF 20% 10V X5R-CERM 0402-8 ROOM=LAT_FEM_5G
C316_W 33PF 5% 16V CER-NP0-C0G 01005-1 ROOM=LAT_FEM_5G
C319_W 1.0UF 20% 10V X5R-CERM 0201-1 ROOM=LAT_FEM_5G
138S0831
C318_W 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=LAT_FEM_5G
C314_W 33PF 5% 16V CER-NP0-C0G 01005-1 ROOM=LAT_FEM_5G
PP1V825_S2_LOWER
684
L373_W 1.1NH-+/-0.1NH-0.85A 01005
687
50_WLAN_A_C1_TXRX_FEM_M
C371_W 0.2PF +/-0.05PF 16V CERM 01005
C376_W 0.3PF +/-0.05PF 16V C0G-CERM 01005
50_WLAN_A_LAT_TXRX_FEM
WLAN_TX/RX
LAA_RX
SAM_TX/RX
VBAT
VBAT
VDD_1V8
LAT_FEM_5G
353S03079
U_5G_L_W
SKY55507
LGA
ANT
PDET/TSENSE
GND
687 689 RFFE_WLAN_TO_LAT_5G_FEM_RST_L
684 687 689 SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK
684 687 689 SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA
687 689 GPIO_WLAN_TO_LAT_5G_FEM_LNA_BYP_EN
WLAN_RFFE_RST_L
WLAN_RFFE_CLK
WLAN_RFFE_DATA
WLAN_GPIO_0
LAA_RFFE_VIO
LAA_RFFE_CLK
LAA_RFFE_DATA
SAM_CTRL
131S00353
C384_W 10PF 5% 16V NP0/C0G 01005 ROOM=LAT_FEM_5G NOSTUFF
117S00066
R383_W 1M 5% 1/32W TK 01005-1 ROOM=LAT_FEM_5G
50_WLAN_A_BPF_M
L313_W 1NH-+/-0.05NH-0.9A 01005
C312_W 0.2PF +/-0.05PF 16V CERM 01005
50_WLAN_A_BPF
C313_W 0.2PF +/-0.05PF 16V CERM 01005
ANALOG_LAT_5G_FEM_TO_WLAN_PDTS
687 689
131S00353
C390_W 10PF 5% 16V NP0/C0G 01005 ROOM=LAT_FEM_5G NOSTUFF
LAT_FEM_5G
155S00653
BPF_W5G_L_W
ACPF-8150-AP1
LGA
5G
ANT
GND
50_WLAN_A_ANT5_M
L312_W 0.5NH-+/-0.05NH-0.1A 01005
C310_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=LAT_FEM_5G
C311_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=LAT_FEM_5G
ANT 5 = LAT ANT
WLAN_A
50_WLAN_A_ANT5
684



SM PP357_W P2MM-NSM ROOM=LAT_FEM_5G BOTTOM
SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK 684 687 689
SM PP358_W P2MM-NSM ROOM=LAT_FEM_5G BOTTOM
SHIELD_RFFE_WLAN_TO_LAT_FEMS_DATA 684 687 689
SM PP0700_W P2MM-NSM ROOM=LAT_FEM_5G BOTTOM
RFFE_WLAN_TO_LAT_5G_FEM_RST_L 687 689
SM PP0701_W P2MM-NSM ROOM=LAT_FEM_5G BOTTOM
GPIO_WLAN_TO_LAT_5G_FEM_LNA_BYP_EN 687 689
SM PP0702_W P2MM-NSM ROOM=LAT_FEM_5G BOTTOM
ANALOG_LAT_5G_FEM_TO_WLAN_PDTS 687 689

PAGE TITLE

5G rFEM (LAT) (7)

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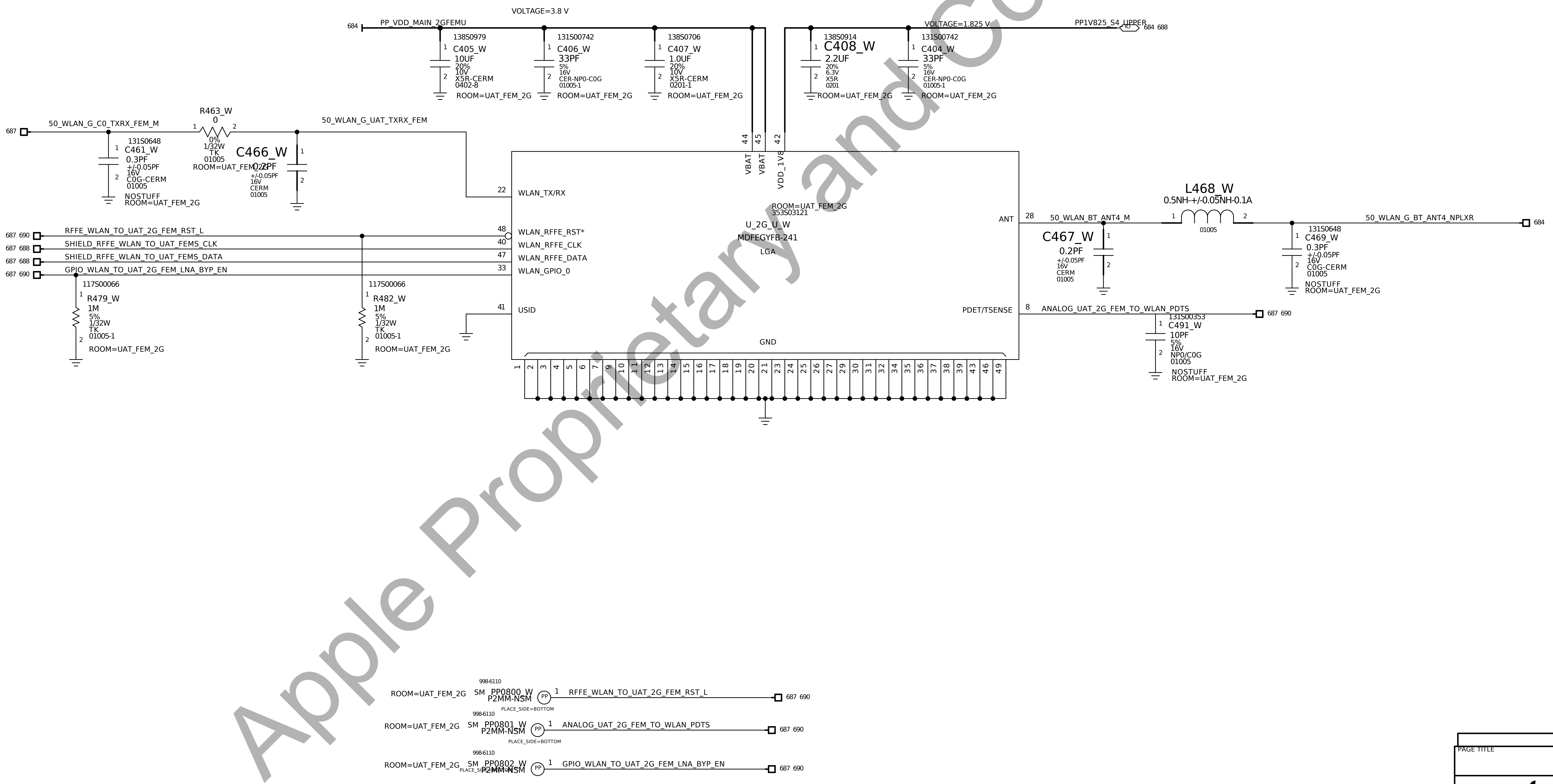
UAT 2.4 GHZ RFEM



VOLTAGE=3.8 V
684 PP_VDD_MAIN_2GFEMU
138S0979 C405_W 10UF 20% 10V X5R-CERM 0402-8 ROOM=UAT_FEM_2G
131S00742 C406_W 33PF 5% 16V CER-NP0-C0G 01005-1 ROOM=UAT_FEM_2G
138S0706 C407_W 1.0UF 20% 10V X5R-CERM 0201-1 ROOM=UAT_FEM_2G
138S0914 C408_W 2.2UF 20% 6.3V X5R 0201 ROOM=UAT_FEM_2G
131S00742 C404_W 33PF 5% 16V CER-NP0-C0G 01005-1 ROOM=UAT_FEM_2G
VOLTAGE=1.825 V
PP1V825_S4_UPPER 684 688
687 50_WLAN_G_C0_TXRX_FEM_M
R463_W 0 0% 1/32W TK 01005 ROOM=UAT_FEM_2G
131S0648 C461_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM_2G
C466_W 0.2PF +/-0.05PF 16V CERM 01005
50_WLAN_G_UAT_TXRX_FEM
687 690 RFFE_WLAN_TO_UAT_2G_FEM_RST_L
687 688 SHIELD_RFFE_WLAN_TO_UAT_FEMS_CLK
687 688 SHIELD_RFFE_WLAN_TO_UAT_FEMS_DATA
687 690 GPIO_WLAN_TO_UAT_2G_FEM_LNA_BYP_EN
117S00066 R479_W 1M 5% 1/32W TK 01005-1 ROOM=UAT_FEM_2G
117S00066 R482_W 1M 5% 1/32W TK 01005-1 ROOM=UAT_FEM_2G
44 VBAT
45 VBAT
42 VDD_1V8
22 WLAN_TX/RX
48 WLAN_RFFE_RST*
40 WLAN_RFFE_CLK
47 WLAN_RFFE_DATA
33 WLAN_GPIO_0
41 USID
ROOM=UAT_FEM_2G 353S03121
U_2G_U_W
MDFEGYFB-241
LGA
GND
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 23 24 25 26 27 29 30 31 32 34 35 36 37 38 39 43 46 49
ANT 28 50_WLAN_BT_ANT4_M
C467_W 0.2PF +/-0.05PF 16V CERM 01005
L468_W 0.5NH-+/-0.05NH-0.1A 01005
50_WLAN_G_BT_ANT4_NPLXR 684
131S0648 C469_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM_2G
PDET/TSENSE 8 ANALOG_UAT_2G_FEM_TO_WLAN_PDTS 687 690
131S00353 C491_W 10PF 5% 16V NP0/C0G 01005 NOSTUFF ROOM=UAT_FEM_2G
998-6110 ROOM=UAT_FEM_2G SM PP0800_W P2MM-NSM PP 1 RFFE_WLAN_TO_UAT_2G_FEM_RST_L 687 690 PLACE_SIDE=BOTTOM
998-6110 ROOM=UAT_FEM_2G SM PP0801_W P2MM-NSM PP 1 ANALOG_UAT_2G_FEM_TO_WLAN_PDTS 687 690 PLACE_SIDE=BOTTOM
998-6110 ROOM=UAT_FEM_2G SM PP0802_W P2MM-NSM PP 1 GPIO_WLAN_TO_UAT_2G_FEM_LNA_BYP_EN 687 690 PLACE_SIDE=BOTTOM

PAGE TITLE

2G4 rFEM (UAT) (8)

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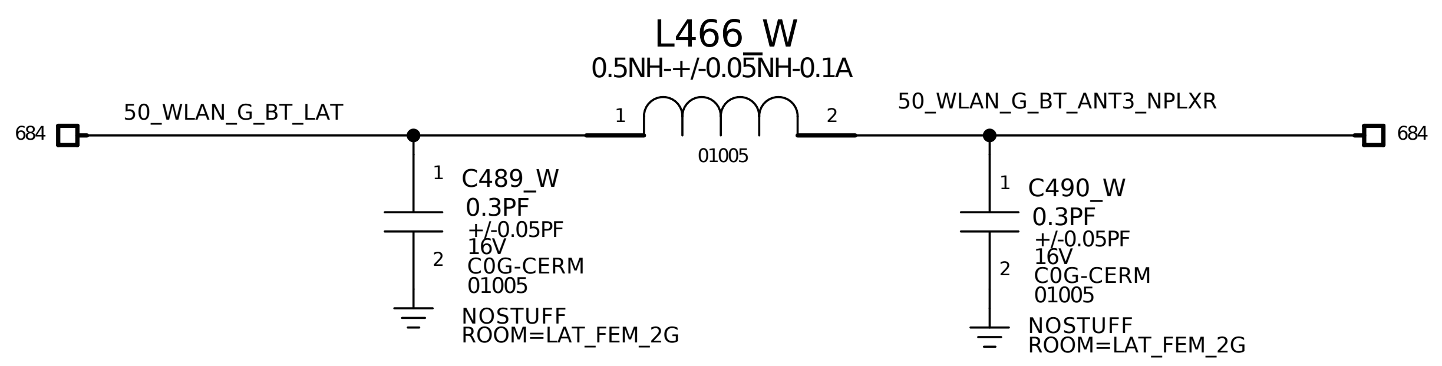
LAT 2.4 GHZ RFEM


L466_W
0.5NH-+/-0.05NH-0.1A
01005
1
2
684
50_WLAN_G_BT_LAT
50_WLAN_G_BT_ANT3_NPLXR
684
C489_W
0.3PF
+/-0.05PF
16V
C0G-CERM
01005
NOSTUFF
ROOM=LAT_FEM_2G
C490_W
0.3PF
+/-0.05PF
16V
C0G-CERM
01005
NOSTUFF
ROOM=LAT_FEM_2G

PAGE TITLE
2G4 rFEM (LAT) (9)

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REV	ECN	DESCRIPTION OF REVISION	CK APPD DATE
6	0058492950	ENGINEERING RELEASED	2024-09-17

HIER_RADIO_S_BG

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4	4	BBPMU (1/2)
5	5	BBPMU (2/2)
6	6	BASEBAND (1/3)
7	7	BASEBAND (2/3)
8	8	BASEBAND (3/3)
9	9	CLOCKING
10	10	CARPO
11	11	CARPO POWER
12	12	ETIC
13	13	FR1 LAT LB/2G SPAD
14	14	FR1 LAT HB SPAD
15	15	FR1 LAT UHB SPAD
16	16	FR1 LAT MIMO DSM
17	17	FR1 LAT COUPLERS
18	18	FR1 UAT TX DSM
19	19	FR1 UAT UHB DSM
20	20	FR1 UAT RX (1/2)
21	21	FR1 UAT RX (2/2)
22	22	FR1 UAT COUPLERS
23	23	FR1 UAT ANTENNAS & GPS
24	24	FR1 ANTENNA TUNERS
25	25	TEST POINTS
26	26	CONSTRAINTS

DRAWING TITLE

SCH,MLB,BG

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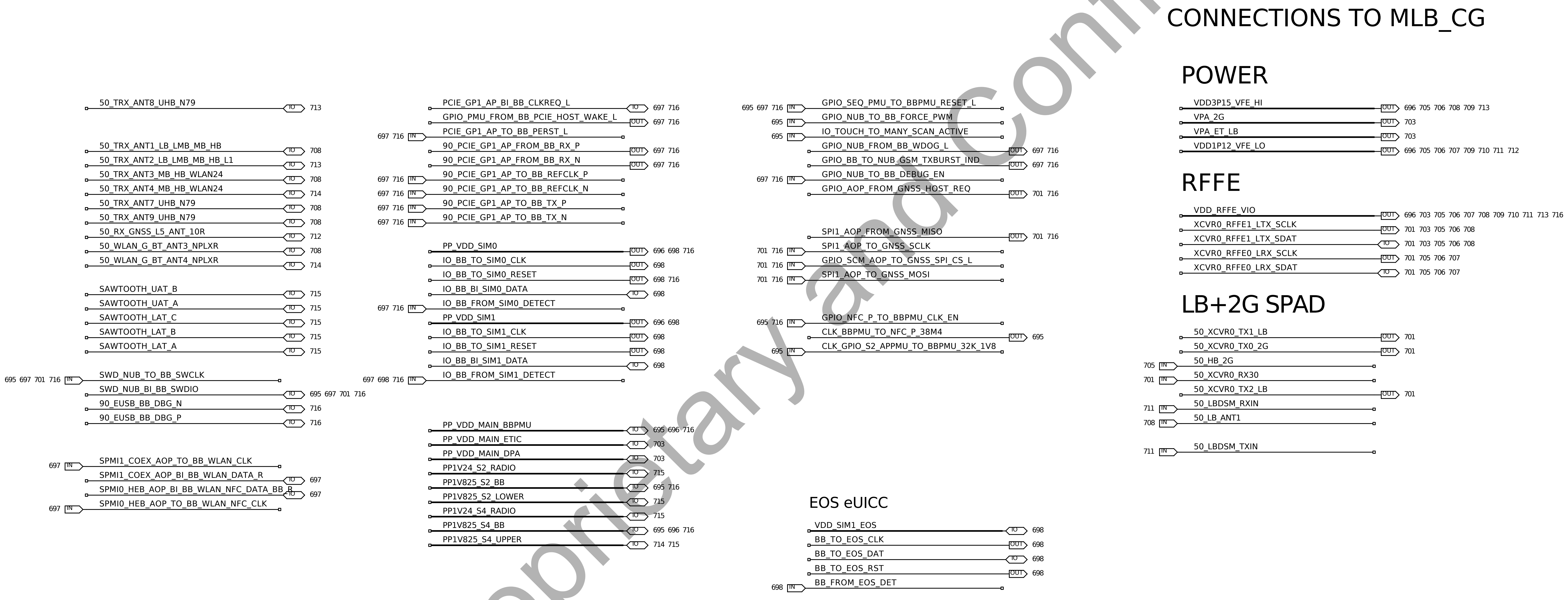
PORTS


CONNECTIONS TO MLB_CG
50_TRX_ANT8_UHB_N79 IO 713
50_TRX_ANT1_LB_LMB_MB_HB IO 708
50_TRX_ANT2_LB_LMB_MB_HB_L1 IO 713
50_TRX_ANT3_MB_HB_WLAN24 IO 708
50_TRX_ANT4_MB_HB_WLAN24 IO 714
50_TRX_ANT7_UHB_N79 IO 708
50_TRX_ANT9_UHB_N79 IO 708
50_RX_GNSS_L5_ANT_10R IO 712
50_WLAN_G_BT_ANT3_NPLXR IO 708
50_WLAN_G_BT_ANT4_NPLXR IO 714
SAWTOOTH_UAT_B IO 715
SAWTOOTH_UAT_A IO 715
SAWTOOTH_LAT_C IO 715
SAWTOOTH_LAT_B IO 715
SAWTOOTH_LAT_A IO 715
695 697 701 716 IN SWD_NUB_TO_BB_SWCLK
SWD_NUB_BI_BB_SWDIO IO 695 697 701 716
90_EUSB_BB_DBG_N IO 716
90_EUSB_BB_DBG_P IO 716
697 IN SPMI1_COEX_AOP_TO_BB_WLAN_CLK
SPMI1_COEX_AOP_BI_BB_WLAN_DATA_R IO 697
SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA_BB_R IO 697
697 IN SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
PCIE_GP1_AP_BI_BB_CLKREQ_L IO 697 716
GPIO_PMU_FROM_BB_PCIE_HOST_WAKE_L OUT 697 716
697 716 IN PCIE_GP1_AP_TO_BB_PERST_L
90_PCIE_GP1_AP_FROM_BB_RX_P OUT 697 716
90_PCIE_GP1_AP_FROM_BB_RX_N OUT 697 716
697 716 IN 90_PCIE_GP1_AP_TO_BB_REFCLK_P
697 716 IN 90_PCIE_GP1_AP_TO_BB_REFCLK_N
697 716 IN 90_PCIE_GP1_AP_TO_BB_TX_P
697 716 IN 90_PCIE_GP1_AP_TO_BB_TX_N
PP_VDD_SIM0 OUT 696 698 716
IO_BB_TO_SIM0_CLK OUT 698
IO_BB_TO_SIM0_RESET OUT 698 716
IO_BB_BI_SIM0_DATA IO 698
697 716 IN IO_BB_FROM_SIM0_DETECT
PP_VDD_SIM1 OUT 696 698
IO_BB_TO_SIM1_CLK OUT 698
IO_BB_TO_SIM1_RESET OUT 698
IO_BB_BI_SIM1_DATA IO 698
697 698 716 IN IO_BB_FROM_SIM1_DETECT
PP_VDD_MAIN_BBPMU IO 695 696 716
PP_VDD_MAIN_ETIC IO 703
PP_VDD_MAIN_DPA IO 703
PP1V24_S2_RADIO IO 715
PP1V825_S2_BB IO 695 716
PP1V825_S2_LOWER IO 715
PP1V24_S4_RADIO IO 715
PP1V825_S4_BB IO 695 696 716
PP1V825_S4_UPPER IO 714 715
695 697 716 IN GPIO_SEQ_PMU_TO_BBPMU_RESET_L
695 IN GPIO_NUB_TO_BB_FORCE_PWM
695 IN IO_TOUCH_TO_MANY_SCAN_ACTIVE
GPIO_NUB_FROM_BB_WDOG_L OUT 697 716
GPIO_BB_TO_NUB_GSM_TXBURST_IND OUT 697 716
697 716 IN GPIO_NUB_TO_BB_DEBUG_EN
GPIO_AOP_FROM_GNSS_HOST_REQ OUT 701 716
SPI1_AOP_FROM_GNSS_MISO OUT 701 716
701 716 IN SPI1_AOP_TO_GNSS_SCLK
701 716 IN GPIO_SCM_AOP_TO_GNSS_SPI_CS_L
701 716 IN SPI1_AOP_TO_GNSS_MOSI
695 716 IN GPIO_NFC_P_TO_BBPMU_CLK_EN
CLK_BBPMU_TO_NFC_P_38M4 OUT 695
695 IN CLK_GPIO_S2_APPMU_TO_BBPMU_32K_1V8
EOS eUICC
VDD_SIM1_EOS IO 698
BB_TO_EOS_CLK OUT 698
BB_TO_EOS_DAT IO 698
BB_TO_EOS_RST OUT 698
698 IN BB_FROM_EOS_DET
POWER
VDD3P15_VFE_HI OUT 696 705 706 708 709 713
VPA_2G OUT 703
VPA_ET_LB OUT 703
VDD1P12_VFE_LO OUT 696 705 706 707 709 710 711 712
RFFE
VDD_RFFE_VIO OUT 696 703 705 706 707 708 709 710 711 713 716
XCVR0_RFFE1_LTX_SCLK OUT 701 703 705 706 708
XCVR0_RFFE1_LTX_SDAT IO 701 703 705 706 708
XCVR0_RFFE0_LRX_SCLK OUT 701 705 706 707
XCVR0_RFFE0_LRX_SDAT IO 701 705 706 707
LB+2G SPAD
50_XCVR0_TX1_LB OUT 701
50_XCVR0_TX0_2G OUT 701
705 IN 50_HB_2G
701 IN 50_XCVR0_RX30
50_XCVR0_TX2_LB OUT 701
711 IN 50_LBDSM_RXIN
708 IN 50_LB_ANT1
711 IN 50_LBDSM_TXIN

PAGE TITLE
PORTS (2)

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BLOCK DIAGRAM

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PAGE TITLE
BLOCK DIAGRAM (3)

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FORCE_PWM SOURCE
NOSTUFF
R402_C 0 0% 1/32W TK 01005
IO_TOUCH_TO_MANY_SCAN_ACTIVE 693
R403_C 0 0% 1/32W TK 01005
BBPMU_FORCE_PWM
GPIO_NUB_TO_BB_FORCE_PWM 693
GPIOS
U_BBPMU_C TMQA52B0 WLCSP SYM 8 OF 11
716 TP_BBPMU_GPIO0 J13 GPIO0 INT PD
NC M10 GPIO1 INT PD
NC K12 GPIO2 INT PD
NC L13 GPIO3 INT PD
BB_SIM_CFG L11 GPIO4 INT PD
BB_ESOS_CFG N13 GPIO5 INT PD
INT PD GNSS_ON L9 XCVR0_CLK_REQ 700 701 716
RESET* P8 BBPMU_TO_BB_RESET_L 697 716
INT PU SHDN* N9 BB_TO_BBPMU_SOCHOT_L 697 716
INT PD FORCE_PWM J11 BBPMU_FORCE_PWM
NO PU/PD PMIC_ON H10 GPIO_SEQ_PMU_TO_BBPMU_RESET_L 693 697 716
695 696 697 698 699 702 VDD1P25_RF_HI M6 VDD_IO_1V2
CLK32K G7 CLK32K_BBPMU_1V8
FSLP_32K K10 CLK32K_BB_XCVR0 697 701 716
FCLK_OE K8 BBPMU_TO_MEMS_CLKEN 700 716
INT PD FSYS1_EN H8 GPIO_NFC_P_TO_BBPMU_CLK_EN 693 716
INT PD FSYS2_EN J7 NC
INT PD FSYS3_EN H6 NC
998-30427
VDD1P25_RF_HI 695 696 697 698 699 702
R_ESOSCFGPU_C 511K 1% 1/32W TK 01005 OMIT_TABLE
R_SIMCFGPU_C 511K 1% 1/32W TK 01005 OMIT_TABLE
BB_SIM_CFG
BB_ESOS_CFG
R_ESOSCFGPD_C 511K 1% 1/32W TK 01005 OMIT_TABLE
R_SIMCFGPD_C 511K 1% 1/32W TK 01005 OMIT_TABLE
GPIO_NFC_P_TO_BBPMU_CLK_EN
R419_C 60.4K 1% 1/32W TK 01005-1 NOSTUFF
CLOCKING
U_BBPMU_C TMQA52B0 WLCSP SYM 6 OF 11
VDD_SHAPER C9 VDD_SHAPER INPUT
C400_C 4UF 20% 6.3V CER-X5R 0201
B8 VLDO_SHAPER OUTPUT
XW400_C SHORT-12L-0.1MM-SM
VSS_SHAPER C11 VSS_SHAPER
PLACE_NEAR=C400_C:0.1MM
693 695 696 716 PP1V825_S4_BB
R416_C 2.2 1% 1/32W TK 01005
VDD1P8_CLKBUFF A15 VDD_1V8_CLKBUFF
C402_C 4UF 20% 6.3V CER-X5R 0201
XW402_C SHORT-12L-0.1MM-SM
VSS_FSYS B14 C13 VSS_FSYS
PLACE_NEAR=U_BBPMU_C:0.1MM
PLACE NEAR THEBE.C13
FSYS1 B12 CLK_BBPMU_TO_NFC_P_38M4 693
FSYS2 A11 NC
FSYS3 B10 NC
FSYS_BB A13 NC
FCLK_38M4 A9 CLK_MEMS_TO_BBPMU_38M4 700 716
SUPPLIES
U_BBPMU_C TMQA52B0 WLCSP SYM 7 OF 11
VDD1P2_BBPMU_INT D4 F16 G11 M4 M16 R9 VDD_ANA
VREF F10 VDD0P6_BBPMU_VREF
C408_C 1UF 20% 16V CER-X5R 0201
VSS_REF G9 VSS_REF
PLACE_NEAR=C408_C:0.1MM
XW408 SHORT-12L-0.1MM-SM
693 695 696 716 PP_VDD_MAIN_BBPMU E9 VDD_MAIN_1
VLDO_INT D8 VDD1P2_BBPMU_INT
U5 VDD_MAIN_2
XW409_C
VDD_MAIN_SNS E5 BBPMU_VDD_MAIN_SNS PP_VDD_MAIN_BBPMU
SHORT-12L-0.1MM-SM
PLACE_NEAR=C503_C:1MM
C406_C 4UF 20% 6.3V CER-X5R 0201
C5 VDD_MAIN_3
F4 VDD_MAIN_4
VDD1P2_BBPMU_INT F6 P14 VDD_DIG
693 695 696 716 PP1V825_S4_BB E7 VDD_1V8_2
ADC
U_BBPMU_C TMQA52B0 WLCSP SYM 9 OF 11
F12 ANAMON1
E11 ANAMON2
D12 ANAMON3
C15 ANAMON4
E13 ANAMON5
696 VDD3P4_BOOST D14 VMBX
ADC1 F14 BB_PRODUCT_ID
ADC2 G13 BB_REVISION_ID
ADC3 H14 BB_NTC
C_NTC_C 100PF 5% 35V NP0-C0G 01005
R_NTC_C 10K-1% 01005-1 107S00349
R_REV_C 22.1K 1% 1/32W TK 01005
R_PROD_C 1.4K 1% 1/32W TK 01005
TEST
U_BBPMU_C TMQA52B0 WLCSP SYM 10 OF 11
M14 DFT_CTRL0
693 697 701 716 SWD_NUB_TO_BB_SWCLK K14 DFT_CTRL1
D6 DFT_CTRL2
693 697 701 716 SWD_NUB_BI_BB_SWDIO K6 SWD_TMS
SPMI_SDATA N7 SPMI_BB_TO_BBPMU_DAT 697
SPMI_SCLK L7 SPMI_BB_TO_BBPMU_CLK 697
VPP P6
GND
U_BBPMU_C TMQA52B0 WLCSP SYM 11 OF 11
A1 B16 C3 C7 D10 D16 F8 H4 H12 H16 J9 VSS
K4 K16 M8 M12 P4 P16 R7 R13 T4 T16 U11 VSS
CLK 32K
NOSTUFF
L400_C 10OHM-50%-0.75A-0.07OHM 01005
693 716 PP1V825_S2_BB
PP1V8_CLK32K
C410_C 1UF 20% 16V CER-X5R 0201 NOSTUFF
C412_C 0.1UF 20% 6.3V X5R-CERM 01005 NOSTUFF
G_32K_C 32.768KHZ CSP-1 NOSTUFF
VDD NC CLKOUT GND
NC
197S00437
CLK32K_BBPMU_1V8_R
716 TO PROBING POINT
R400_C 0 0% 1/32W TK 01005 NOSTUFF
CLK32K_BBPMU_1V8
693 CLK_GPIO_S2_APPMU_TO_BBPMU_32K_1V8
R401_C 0 0% 1/32W TK 01005
DESENSE SHUNTS
693 695 696 716 PP_VDD_MAIN_BBPMU
696 698 VDD1P0_DIG1
696 698 VDD0P86_DIG2
696 698 VDD0P84_DIG3
696 698 VDD0P78_SRAM
696 698 702 VDD0P78_FIXED
696 698 702 VDD1P25_RF_HI
695 696 697 698 699 702 VDD1P25_RF_HI
696 698 702 VDD0P97_RF_LO
696 702 VDD0P63_XCVR0_DIG
C404_C 18PF 5% 16V CER 01005 NOSTUFF
C414_C 18PF 5% 16V CER 01005 NOSTUFF
C416_C 18PF 5% 16V CER 01005 NOSTUFF
C420_C 18PF 5% 16V CER 01005 NOSTUFF
C422_C 18PF 5% 16V CER 01005 NOSTUFF
C424_C 18PF 5% 16V CER 01005 NOSTUFF
C425_C 18PF 5% 16V CER 01005 NOSTUFF
C426_C 18PF 5% 16V CER 01005 NOSTUFF
C427_C 18PF 5% 16V CER 01005 NOSTUFF

SIM CONFIG

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
118S00255	RFSKU:CHN	R_SIMCFGPU_C	CRITICAL	1	RES,TK,1K OHM,1%,1/32W,01005
118S00244	RFSKU:US	R_SIMCFGPD_C	CRITICAL	1	RES,TK,511K OHM,1%,1/32W,01005
118S00255	RFSKU:RS	R_SIMCFGPD_C	CRITICAL	1	RES,TK,1K OHM,1%,1/32W,01005
118S00255	RFSKU:ROW	R_SIMCFGPD_C	CRITICAL	1	RES,TK,1K OHM,1%,1/32W,01005

PROVISIONING TO PD ON MLB_BG
VOLTAGE DIVIDER WITH 24.9K OHM ON MLB_CG (R7520_S)
(DUPLICATE OF R7521_S ON MLB_CG)

THEBE GPIO4 SIM_CFG

1K	PD	LL	PSIM + ESIM
511K	PD	L	ESIM ONLY
511K	PU	H	PSIM ONLY (NOT PLANNED)
1K	PU	HH	DUAL PSIM

THEBE GPIO5 ESOS

1K	PD	LL	NOT USED OR DISABLED
511K	PD	L	DISABLED
511K	PU	H	ENABLED
1K	PU	HH	NOT USED OR ENABLED

SUPPLIED BY AP'S PP1V8_S4 TO
ENABLE NFC CLOCKING IN LPEM

FAMILY ID DETERMINED
BY BOARD_ID @ LEDA

BOARD_ID=0X3=2025 IPHONE

PRODUCT_ID	REVISION_ID
1.4K = V59	1.4K = PROTO0
4.53K = D23	4.53K = PROTO1
8.06K	8.06K = PROTO2
12.1K	12.1K = EVT
16.9K	16.9K = CRB
22.1K	22.1K = DVT
28.0K	28.0K
34.8K	34.8K
42.2K	42.2K
51.1K	51.1K
60.4K	60.4K
71.5K	71.5K
84.5K	84.5K
97.6K	97.6K
113K	113K
130K	130K
150K	150K
174K	174K
200K	200K
226K	226K
226K	226K
255K	255K

32K MEMS VIBRATION MITIGATION
REMOVED

PLACEMENT_NOTE=UF DAM REQUIRED

SUPPLIED BY AP'S PP1V8_S2 DUE
TO CLOCK START-UP REQUIREMENTS

32K SUPPLIED BY AP PMU

PAGE TITLE
BBPMU (1/2) (4)

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INDUCTOR FOOTPRINT ALT
COMBO A
U_BBPMU_C
TMQA52B0
WLCSP
SYM 1 OF 11
VDD_MAIN_COMBOA
VSS_BUCK_COMBOA
BUCK0 13.7A
BUCK3 4.3A
BUCK1 3A
BUCK2 2.5A
BUCK4 1.5A
PP_VDD_MAIN_BBPMU
L500_C 0.22UH-20%-5.8A-0.04OHM 1608 152S00818
L501_C 0.47UH-20%-4.9A-0.025OHM CIGT2016R6TB 152S02018
L502_C MTFE2016-2SM 152S00897 0.1UH-20%-6.1A-0.019OHM
L503_C 470NH-20%-5.6A-0.028OHM CIGT2016-SM1 152S02040
L504_C 0.47UH-20%-4.9A-0.025OHM CIGT2016R6TB 152S02018
L505_C 0.47UH-20%-4.9A-0.025OHM CIGT2016R6TB 152S02018
L506_C 0.47UH-20%-2.8A-0.067OHM 1210 152S00854
VDD1P0_DIG1
VDD0P78_SRAM
VDD0P86_DIG2
VDD0P84_DIG3
VDD0P78_FIXED
COMBO A Z=0.65MM
REMOVED
No smaller footprint alt after EVT
Removed 152S01851 since EOL
0.5mm x 1.6mm
0.6mm x 1.6mm
PLACE_NEAR=U_BB_C:1MM
XW509_C XW505_C XW501_C XW506_C XW502_C SHORT-12L-0.1MM-SM
COMBO B
SYM 2 OF 11
VDD_MAIN_COMBOB_C
VSS_BUCK_COMBOB_C
BUCK6 2.8A
BUCK7 2A
BUCK8 1.8A
L508_C 0.47UH-20%-4.9A-0.025OHM CIGT2016R6TB 152S02018
L509_C 1UH-20%-3.6A-0.068OHM PIPF2016FE-SM 152S01525
L510_C 0.47UH-20%-3.5A-0.055OHM 0603 152S01532
VDD1P25_RF_HI
VDD0P97_RF_LO
VDD0P63_XCVR0_DIG
COMBO B Z=0.65MM
XW503_C XW507_C XW504_C SHORT-12L-0.1MM-SM
PLACE_NEAR=U_CARPO_C:1MM
NC
LDOS
SYM 4 OF 11
LDO0 150MA
LDO1 20MA
LDO4 400MA
VDD3P15_VFE_HI
VDD1P5_MEMS
VDD1P12_VFE_LO
VDD_RFFE_VIO
PP1V825_S4_BB
VDD1P25_RF_HI
VDD3P4_BOOST
SUPPRESSES OVERSHOOT DURING SWITCH TURN ON
LDOS
SYM 5 OF 11
LDO2 550MA
LDO2 30MA
LDO SIM1 60MA
LDO SIM2 60MA
LDO3 200MA
VDD1P1
VDD0P72_LOW
PP_VDD_SIM0
PP_VDD_SIM1
VDD0P6_VDDQL
VDD1P8
BOOST
SYM 3 OF 11
L511_C 0.47UH-20%-1.7A-0.175OHM PIJT1005FE-SM 152S00874
LX_BOOST
BSTLQ_LX
BSTLQ_VOUT
BSTLQ_FB
VSS_BSTLQ
XW500_C SHORT-12L-0.1MM-SM
C531_C 16UF 20% 4V MATERIAL=X5R 0402-0.1MM-1 Z=0.65MM
8 7 6 5 4 3 2 1
D C B A

PAGE TITLE

BBPMU (2/2) (5)

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U_BB_C
TMRP15C0-C1
FCCSP
SYM 1 OF 8
998-34644
PCIE_GP1_AP_TO_BB_PERST_L
PCIE_GP1_AP_BI_BB_CLKREQ_L
GPIO_PMU_FROM_BB_PCIE_HOST_WAKE_L
90_PCIE_GP1_AP_FROM_BB_RX_P
90_PCIE_GP1_AP_FROM_BB_RX_N
90_PCIE_GP1_AP_TO_BB_TX_P
90_PCIE_GP1_AP_TO_BB_TX_N
90_PCIE_GP1_AP_TO_BB_REFCLK_P
90_PCIE_GP1_AP_TO_BB_REFCLK_N
PCIE_RCALP
PCIE_RCALN
PERST
CLKREQ
WAKE
INT PD
INT PU
OPEN DRAIN
PCIE_TX0_P
PCIE_TX0_N
PCIE_RX0_P
PCIE_RX0_N
PCIE_REFCLK_P
PCIE_REFCLK_N
PCIE_RCAL_P
PCIE_RCAL_N
DBG_USB_EDM
DBG_USB_EDP
DBG_USB_RESREF
DOCK_CONNECT
AON_SLEEP1_RESET* OUTPUT
DDR INPUT
DDR_RET*
DDR_RREF
DDR_ZQ0
90_EUSB_KIS_N
90_EUSB_KIS_P
USB_RESREF
GPIO_NUB_TO_BB_DEBUG_EN
BB_TO_DDR_SLEEP_RESET_L
BB_DDR_RREF
BB_DDR_ZQ0
R601_C 200 1% 1/32W TK 01005-1
VDD0P6_VDDQL
R602_C 240 1% 1/32W TK 01005
R603_C 240 1% 1/32W TK 01005
R600_C 200 1% 1/32W TK 01005-1
C600_C 10PF 2% 25V C0G 01005
SYM 2 OF 8
85_MPHY_XCVR0_TO_BB_RX0_P
85_MPHY_XCVR0_TO_BB_RX0_N
85_MPHY_XCVR0_TO_BB_RX1_P
85_MPHY_XCVR0_TO_BB_RX1_N
85_MPHY_XCVR0_TO_BB_RX2_P
85_MPHY_XCVR0_TO_BB_RX2_N
85_MPHY_XCVR0_TO_BB_RX3_P
85_MPHY_XCVR0_TO_BB_RX3_N
AMPHY_0_RX0_DP
AMPHY_0_RX0_DN
AMPHY_0_RX1_DP
AMPHY_0_RX1_DN
AMPHY_0_RX2_DP
AMPHY_0_RX2_DN
AMPHY_0_RX3_DP
AMPHY_0_RX3_DN
AMPHY_1_RX0_DP
AMPHY_1_RX0_DN
AMPHY_1_RX1_DP
AMPHY_1_RX1_DN
AMPHY_1_RX2_DP
AMPHY_1_RX2_DN
AMPHY_1_RX3_DP
AMPHY_1_RX3_DN
AMPHY_1_RX4_DP
AMPHY_1_RX4_DN
AMPHY_1_RX5_DP
AMPHY_1_RX5_DN
AMPHY_0_TX0_DP
AMPHY_0_TX0_DN
85_MPHY_BB_TO_XCVR0_TX0_P
85_MPHY_BB_TO_XCVR0_TX0_N
AMPHY_1_TX0_DP
AMPHY_1_TX0_DN
AMPHY_1_TX1_DP
AMPHY_1_TX1_DN
AMPHY_1_TX2_DP
AMPHY_1_TX2_DN
AMPHY_1_TX3_DP
AMPHY_1_TX3_DN
AMPHY_0_PAD_CMN
AMPHY_1_PAD_CMN
NC
SYM 3 OF 8
BBPMU_TO_BB_RESET_L
CFS*
COLD_RESET*
LP4_IN_RESET*
GPIO_SEQ_PMU_TO_BBPMU_RESET_L
WARM_RESET*
GPIO_NUB_FROM_BB_WDOG_L
WDOG*
SCM_IO0
AOP_BYPASS_EN
HOLD_RESET
TEST_MODE
CLK32K_BB_XCVR0
RT_CLK32768
XIO_CLK_48
50_CLK_MEMS_TO_BB_38M4
PADIO_CKRX_FSYS_CLK
SWD_NUB_TO_BB_SWCLK
SWD_NUB_BI_BB_SWDIO
JTAG_SEL
JTAG_TCK
JTAG_TDI
JTAG_TDO
JTAG_TMS
JTAG_TRST*
NO PUPD
SPMI_M_CLK
SPMI_M_DATA
SOCHOT*
DWB_CLK
DWB_DATA
EINT0
EINT1
CC_IN0
CC_IN1
USIM0_RST
USIM1_RST
UART0_RX
UART1_RX
SPMI_S0_CLK
SPMI_S0_DATA
SPMI_S1_CLK
SPMI_S1_DATA
COEX_GPIO0
COEX_GPIO1
COEX_GPIO2
SPMI_BB_TO_BBPMU_CLK_R
SPMI_BB_TO_BBPMU_DAT_R
SPMI_BB_TO_BBPMU_CLK
SPMI_BB_TO_BBPMU_DAT
R631_C 0 0% 1/32W TK 01005
R632_C 0 0% 1/32W TK 01005
BB_TO_BBPMU_SOCHOT_L
DWB_SCLK
DWB_SDAT
XCVR0_DWB_IRQ
VDD1P25_RF_HI
R614_C 10K 1% 1/32W TK 01005-1
R615_C 270K 1% 1/32W TK 01005
RFSKU:RS&RFSKU:ROW&RFSKU:CHN
OMIT_TABLE
IO_BB_FROM_SIM0_DETECT
IO_BB_FROM_SIM1_DETECT
R616_C 10K 1% 1/32W TK 01005-1
RFSKU:US
SIM0_RST
SIM1_RST
UART_AP_TO_BB_TXD
UART_MEMS_TD
SPMI1_COEX_AOP_TO_BB_WLAN_CLK
SPMI_COEX_DAT_R
SPMI0_HEB_AOP_TO_BB_WLAN_NFC_CLK
SPMI_HEB_DAT_R
R605_C 0 0% 1/32W TK 01005
R606_C 0 0% 1/32W TK 01005
SPMI1_COEX_AOP_BI_BB_WLAN_DATA_R
SPMI0_HEB_AOP_BI_BB_WLAN_NFC_DATA_BB_R
TP_COEX_GPIO0
SYM 4 OF 8
BOARD_ID0
BOARD_ID1
BOARD_ID2
BOARD_ID3
BOARD_ID4
BOOT_CFG0
BOOT_CFG1
BOOT_CFG2
TP_ANALOGMUX_OUT
ANALOGMUX_OUT
TP_DBGWRAP_TEST_PORT
DBGWRAP_TEST_PORT
BB_TO_GNSS_TIMEMARK
GNSS_TIMEMARK
GPIO_BB_TO_NUB_GSM_TXBURST_IND
GSM_TXBURST
SOC_DEBUG0
SOC_DEBUG1
SOC_DEBUG2
TP_GPIO0
GPIO_0
GPIO_1
GPIO_2
TP_TST_CLKOUT
TST_CLKOUT
TD_B
TD_BS
TD_E
TD_ES
TD_ESD
THERMAL DIODE ONLY USED ON SIVAL
TRX0_RST*
TRX1_RST*
XCVR0_RESET_L
RFFE_VIO
RFFE0_CLK
RFFE0_DATA
RFFE1_CLK
RFFE1_DATA
RFFE2_CLK
RFFE2_DATA
RFFE0_BB_TO_TUNER_CLK
RFFE0_BB_TO_TUNER_DAT
RFFE1_BB_TO_TUNER_CLK
RFFE1_BB_TO_TUNER_DAT
SPI0_MISO
SPI0_MOSI
SPI0_SCLK
SPI0_SSIN
SPI1_MISO
SPI1_MOSI
SPI1_SCLK
SPI1_SSIN
I2C_CLK
I2C_DATA
I2C_BB_TO_EEPROM_SCL
I2C_BB_TO_EEPROM_SDA
USIM0_CLK
USIM0_DATA
USIM1_CLK
USIM1_DATA
SIM0_CLK
SIM0_DAT
SIM1_CLK
SIM1_DAT
UART0_TX
UART1_TX
UART_BB_TO_AP_RXD
VDD1P25_RF_HI
R622_C 4.7K 1% 1/32W TK 01005-1
R604_C 4.7K 1% 1/32W TK 01005-1
R619_C 20K 1% 1/32W TK 01005
RFSKU:US&RFSKU:RS&RFSKU:ROW
PCIE_GP1_AP_BI_BB_CLKREQ_L
GPIO_PMU_FROM_BB_PCIE_HOST_WAKE_L
SIM1_DAT
PCIE_GP1_AP_TO_BB_PERST_L
SPMI_BB_TO_BBPMU_CLK
SPMI_BB_TO_BBPMU_DAT
R625_C 1M 0.5% 1/32W TK 01005
R626_C 1M 0.5% 1/32W TK 01005
R628_C 100K 1% 1/32W TK 01005-1
R612_C 1K 1% 1/32W TK 01005
R613_C 1K 1% 1/32W TK 01005
BOARD_ID0
BOARD_ID1
INTERNAL PD, DURING BOOTSTRAP CAPTURE
BOARD_ID[4:0]
0X0 LEDA SIVAL
0X1 RF DEV
0X2 SINOPE POC
0X3 2025 iPHONE
R618_C 1K 1% 1/32W TK 01005
NOSTUFF
BOOT_CFG0
R633_C 1K 1% 1/32W TK 01005
BOOT_CFG[2:0]
0X0 PCIE PRODUCTION
0X1 PCIE INSECURE

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BASEBAND (1/3) (6)

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U_BB_C
TMRP15C0-C1
FCCSP
SYM 5 OF 8
998-34644
SENSE_VDDQL
VDD0P6_VDDQL
VDDQL_DDR_S1
VDD1P1
VDD2
VDD1P8
VDD1
VDD0P78_FIXED
VDD_FIXED_FR1_S2
VDD_FIXED_FR2_S2
VDD_FIXED_PCIE_S2
VDD_FIXED_PLL_ACM_S2
VDD_FIXED_PLL_DDR_S2
VDD_FIXED_PLL_SOC_S2
VDD12_AMUX_S2
VDD12_EFUSE1
VDD12_EFUSE2
VDD12_MPHY1_S2
VDD12_MPHY2_S2
VDD12_PCIE_S2
VDD12_PLL_ACM_S2
VDD12_PLL_DDR_S2
VDD12_PLL_SOC_S2
VDD12_TSADC_SOC_S2
VDD12_ULPPLL_S2
VDD12_USB_DEBUG_S2
VDD1P25_RF_HI
VDD_RF_HI_ULPLL
R739_C
47
1%
1/32W
TK
01005-1
VDD_LOW_AMUX_S2
VDD_LOW_FLPPLL_S2
VDD_LOW_GRP1_S2
VDD_LOW_GRP3B_S2
VDD_LOW_GRP4_S2
VDD_LOW_S2
VDD_LOW_ULPPLL_S2
VDD_LOW_USB_DEBUG_S2
VDD0P72_LOW
VDDIO12_CKRX_S2
VDDIO12_GRP1_S2
VDDIO12_GRP2_S2
VDDIO12_GRP3_S2
VDDIO12_GRP3B_S2
VDDIO12_GRP4_S2
VDDIO11_RET_DDR_S2
VDD_TD
NC
VDD12_IO_GRP1
VDD12_IO_GRP2
VDD12_IO_GRP3
VDD12_IO_GRP3B
VDD12_IO_GRP4
XW708_C
XW709_C
XW710_C
XW711_C
XW712_C
SHORT-12L-0.1MM-SM
VDD_TD THERMAL DIODE ONLY USED ON SIVAL
C754_C
0.1uF
Removed
No FR2
C758_C
2.2uF
Removed
No FR2
U_BB_C
TMRP15C0-C1
FCCSP
SYM 6 OF 8
998-34644
SENSE_ACM_P
VDD1P0_DIG1
VDD_ACM_SENSE
VDD_ACM
VDD_CPU_SENSE
VDD_CPU
SENSE_CPU_P
VDD0P86_DIG2
VDD_SOC_DDR_S1
SENSE_DDR_P
VDD0P84_DIG3
VDD_SOC_EAST_S1
VDD_SOC_SOUTH_S1
VDD_SOC_S1
VDD_SRAM_S2
VDD0P78_SRAM
OPTION TO DISCONNECT STUB
R701_C
IO_BB_TO_SIM0_CLK
SIM0_CLK_DEBUG
NOSTUFF
PLACE_NEAR=U_SIM0LS_C:10MM
R702_C
IO_BB_BI_SIM0_DATA
SIM0_DAT_DEBUG
SIM LEVEL SHIFTERS
C7061_C: RFSKU:RS&RFSKU:ROW&RFSKU:CHN
C7062_C: RFSKU:RS&RFSKU:ROW&RFSKU:CHN
PP_VDD_SIM0
VDD1P25_RF_HI
U_SIM0LS_C
NVT4557
WLCSP
VCCA
VCCB
RST_HOST
CLK_HOST
IO_HOST
RST_SIM
CLK_SIM
IO_SIM
GND
SIM0_RST
SIM0_CLK
SIM0_DAT
IO_BB_TO_SIM0_RESET
IO_BB_TO_SIM0_CLK
IO_BB_BI_SIM0_DATA
RFSKU:RS&RFSKU:ROW&RFSKU:CHN
INTERNAL 20K PU ON IO
C7063_C: RFSKU:CHN
C7064_C: RFSKU:CHN
PP_VDD_SIM1
U_SIM1LS_C
SIM1_RST
SIM1_CLK
SIM1_DAT
IO_BB_TO_SIM1_RESET
IO_BB_TO_SIM1_CLK
IO_BB_BI_SIM1_DATA
RFSKU:CHN
INTERNAL 20K PU ON IO
EOS eUICC
R703_C
VDD_SIM1_EOS
R704_C
BB_TO_EOS_CLK
Keep R705_C to disconnect stub
R705_C
BB_BI_EOS_DAT_R
R706_C
BB_TO_EOS_RST
R707_C
IO_BB_FROM_SIM1_DETECT
BB_FROM_EOS_DET
R708_C removed
Disable Eos eUICC for China SKU
Stuffing option controlled in NFC schematic
CUTTABLE LINK ON BOTTOM FOR SNIFFING
XW700_C
BB_BI_EOS_DAT_R
BB_TO_EOS_DAT
SHORT-10L-0.5MM-SM
998-7062
R703_C: RFSKU:US&RFSKU:RS&RFSKU:ROW
R704_C: RFSKU:US&RFSKU:RS&RFSKU:ROW
R705_C: RFSKU:US&RFSKU:RS&RFSKU:ROW
R706_C: RFSKU:US&RFSKU:RS&RFSKU:ROW
R707_C: RFSKU:US&RFSKU:RS&RFSKU:ROW

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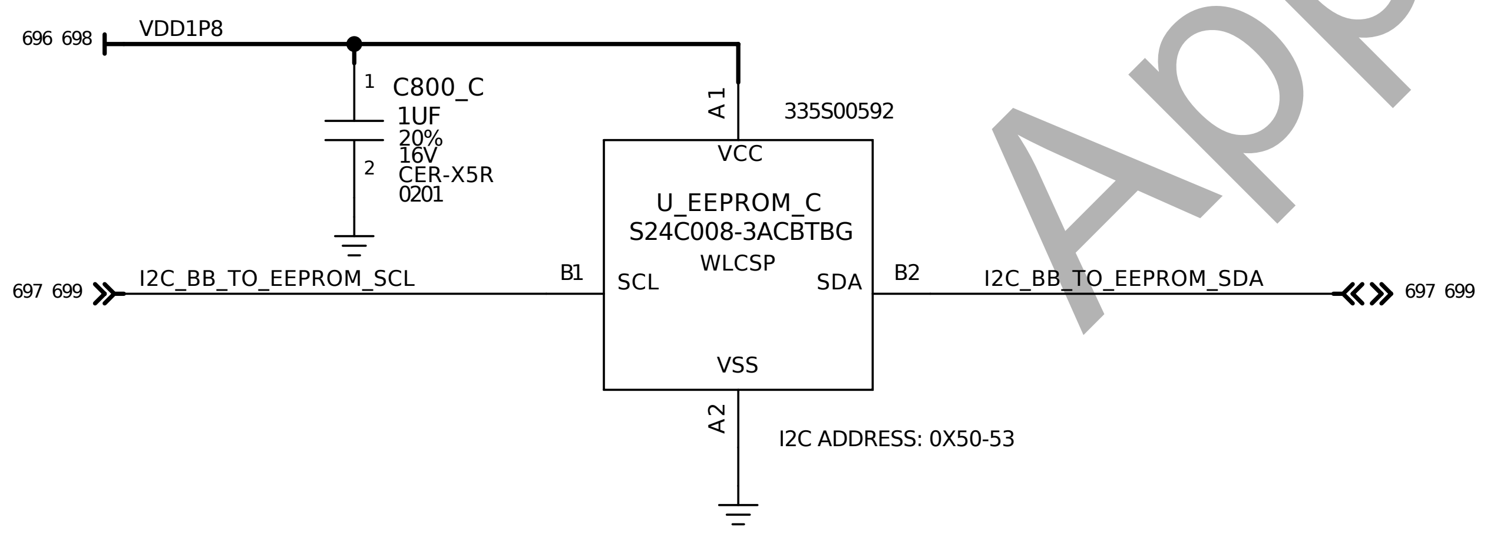
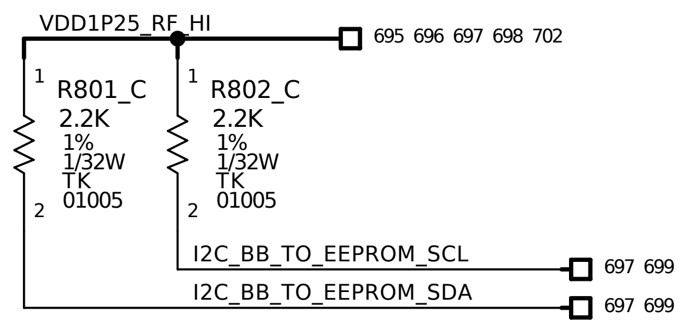
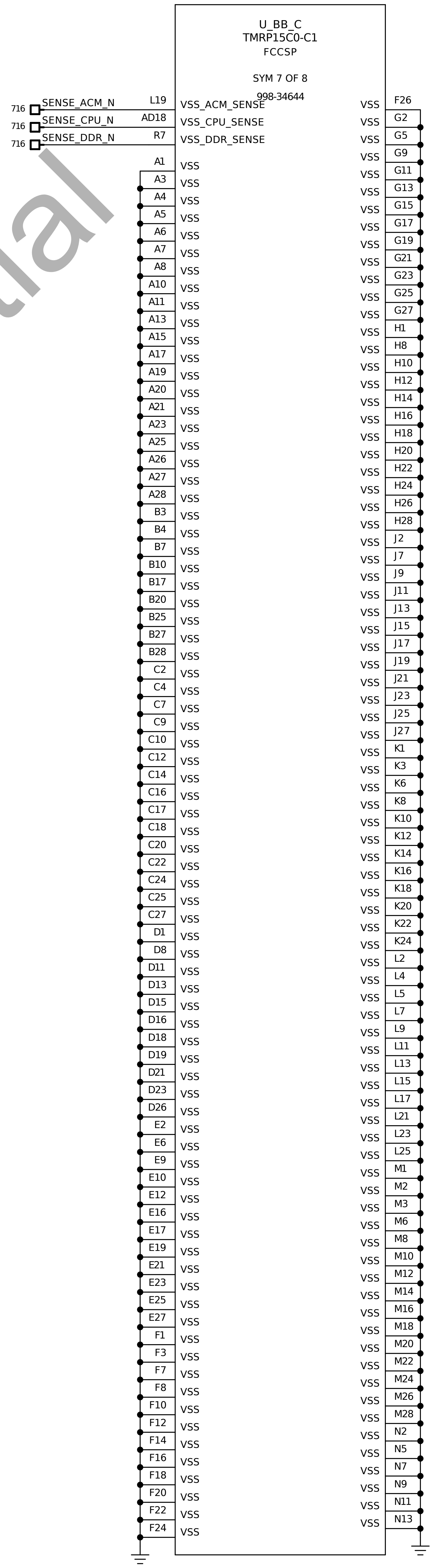
BB EEPROM

ST = 1.8V, 1.2V COMPATIBLE IO
ONSEMI = 1.2V


696 698
VDD1P8
C800_C
1UF
20%
16V
CER-X5R
0201
1
2
A1
335S00592
VCC
U_EEPROM_C
S24C008-3ACBTBG
WLCSP
SCL
SDA
VSS
B1
B2
A2
697 699
I2C_BB_TO_EEPROM_SCL
I2C_BB_TO_EEPROM_SDA
697 699
I2C ADDRESS: 0X50-53


VDD1P25_RF_HI
695 696 697 698 702
R801_C
2.2K
1%
1/32W
TK
01005
R802_C
2.2K
1%
1/32W
TK
01005
1
2
I2C_BB_TO_EEPROM_SCL
697 699
I2C_BB_TO_EEPROM_SDA
697 699


U_BB_C
TMRP15C0-C1
FCCSP
SYM 7 OF 8
998-34644
716 SENSE_ACM_N L19 VSS_ACM_SENSE
716 SENSE_CPU_N AD18 VSS_CPU_SENSE
716 SENSE_DDR_N R7 VSS_DDR_SENSE
A1 VSS
A3 VSS
A4 VSS
A5 VSS
A6 VSS
A7 VSS
A8 VSS
A10 VSS
A11 VSS
A13 VSS
A15 VSS
A17 VSS
A19 VSS
A20 VSS
A21 VSS
A23 VSS
A25 VSS
A26 VSS
A27 VSS
A28 VSS
B3 VSS
B4 VSS
B7 VSS
B10 VSS
B17 VSS
B20 VSS
B25 VSS
B27 VSS
B28 VSS
C2 VSS
C4 VSS
C7 VSS
C9 VSS
C10 VSS
C12 VSS
C14 VSS
C16 VSS
C17 VSS
C18 VSS
C20 VSS
C22 VSS
C24 VSS
C25 VSS
C27 VSS
D1 VSS
D8 VSS
D11 VSS
D13 VSS
D15 VSS
D16 VSS
D18 VSS
D19 VSS
D21 VSS
D23 VSS
D26 VSS
E2 VSS
E6 VSS
E9 VSS
E10 VSS
E12 VSS
E16 VSS
E17 VSS
E19 VSS
E21 VSS
E23 VSS
E25 VSS
E27 VSS
F1 VSS
F3 VSS
F7 VSS
F8 VSS
F10 VSS
F12 VSS
F14 VSS
F16 VSS
F18 VSS
F20 VSS
F22 VSS
F24 VSS
VSS F26
VSS G2
VSS G5
VSS G9
VSS G11
VSS G13
VSS G15
VSS G17
VSS G19
VSS G21
VSS G23
VSS G25
VSS G27
VSS H1
VSS H8
VSS H10
VSS H12
VSS H14
VSS H16
VSS H18
VSS H20
VSS H22
VSS H24
VSS H26
VSS H28
VSS J2
VSS J7
VSS J9
VSS J11
VSS J13
VSS J15
VSS J17
VSS J19
VSS J21
VSS J23
VSS J25
VSS J27
VSS K1
VSS K3
VSS K6
VSS K8
VSS K10
VSS K12
VSS K14
VSS K16
VSS K18
VSS K20
VSS K22
VSS K24
VSS L2
VSS L4
VSS L5
VSS L7
VSS L9
VSS L11
VSS L13
VSS L15
VSS L17
VSS L21
VSS L23
VSS L25
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VSS M2
VSS M3
VSS M6
VSS M8
VSS M10
VSS M12
VSS M14
VSS M16
VSS M18
VSS M20
VSS M22
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VSS N2
VSS N5
VSS N7
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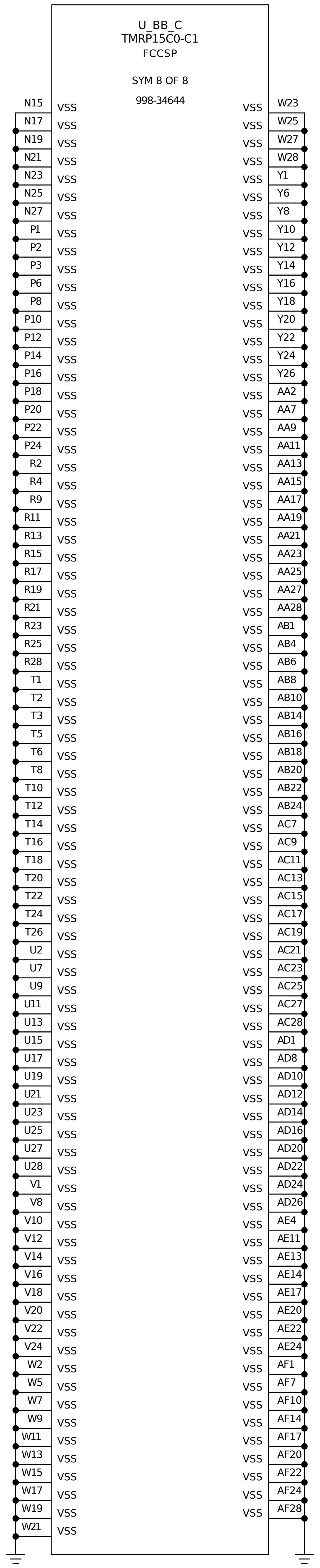
VSS N11
VSS N13


U_BB_C
TMRP15C0-C1
FCCSP
SYM 8 OF 8
998-34644
N15 VSS
N17 VSS
N19 VSS
N21 VSS
N23 VSS
N25 VSS
N27 VSS
P1 VSS
P2 VSS
P3 VSS
P6 VSS
P8 VSS
P10 VSS
P12 VSS
P14 VSS
P16 VSS
P18 VSS
P20 VSS
P22 VSS
P24 VSS
R2 VSS
R4 VSS
R9 VSS
R11 VSS
R13 VSS
R15 VSS
R17 VSS
R19 VSS
R21 VSS
R23 VSS
R25 VSS
R28 VSS
T1 VSS
T2 VSS
T3 VSS
T5 VSS
T6 VSS
T8 VSS
T10 VSS
T12 VSS
T14 VSS
T16 VSS
T18 VSS
T20 VSS
T22 VSS
T24 VSS
T26 VSS
U2 VSS
U7 VSS
U9 VSS
U11 VSS
U13 VSS
U15 VSS
U17 VSS
U19 VSS
U21 VSS
U23 VSS
U25 VSS
U27 VSS
U28 VSS
V1 VSS
V8 VSS
V10 VSS
V12 VSS
V14 VSS
V16 VSS
V18 VSS
V20 VSS
V22 VSS
V24 VSS
W2 VSS
W5 VSS
W7 VSS
W9 VSS
W11 VSS
W13 VSS
W15 VSS
W17 VSS
W19 VSS
W21 VSS
VSS W23
VSS W25
VSS W27
VSS W28
VSS Y1
VSS Y6
VSS Y8
VSS Y10
VSS Y12
VSS Y14
VSS Y16
VSS Y18
VSS Y20
VSS Y22
VSS Y24
VSS Y26
VSS AA2
VSS AA7
VSS AA9
VSS AA11
VSS AA13
VSS AA15
VSS AA17
VSS AA19
VSS AA21
VSS AA23
VSS AA25
VSS AA27
VSS AA28
VSS AB1
VSS AB4
VSS AB6
VSS AB8
VSS AB10
VSS AB14
VSS AB16
VSS AB18
VSS AB20
VSS AB22
VSS AB24
VSS AC7
VSS AC9
VSS AC11
VSS AC13
VSS AC15
VSS AC17
VSS AC19
VSS AC21
VSS AC23
VSS AC25
VSS AC27
VSS AC28
VSS AD1
VSS AD8
VSS AD10
VSS AD12
VSS AD14
VSS AD16
VSS AD20
VSS AD22
VSS AD24
VSS AD26
VSS AE4
VSS AE11
VSS AE13
VSS AE14
VSS AE17
VSS AE20
VSS AE22
VSS AE24
VSS AF1
VSS AF7
VSS AF10
VSS AF14
VSS AF17
VSS AF20
VSS AF22
VSS AF24
VSS AF28

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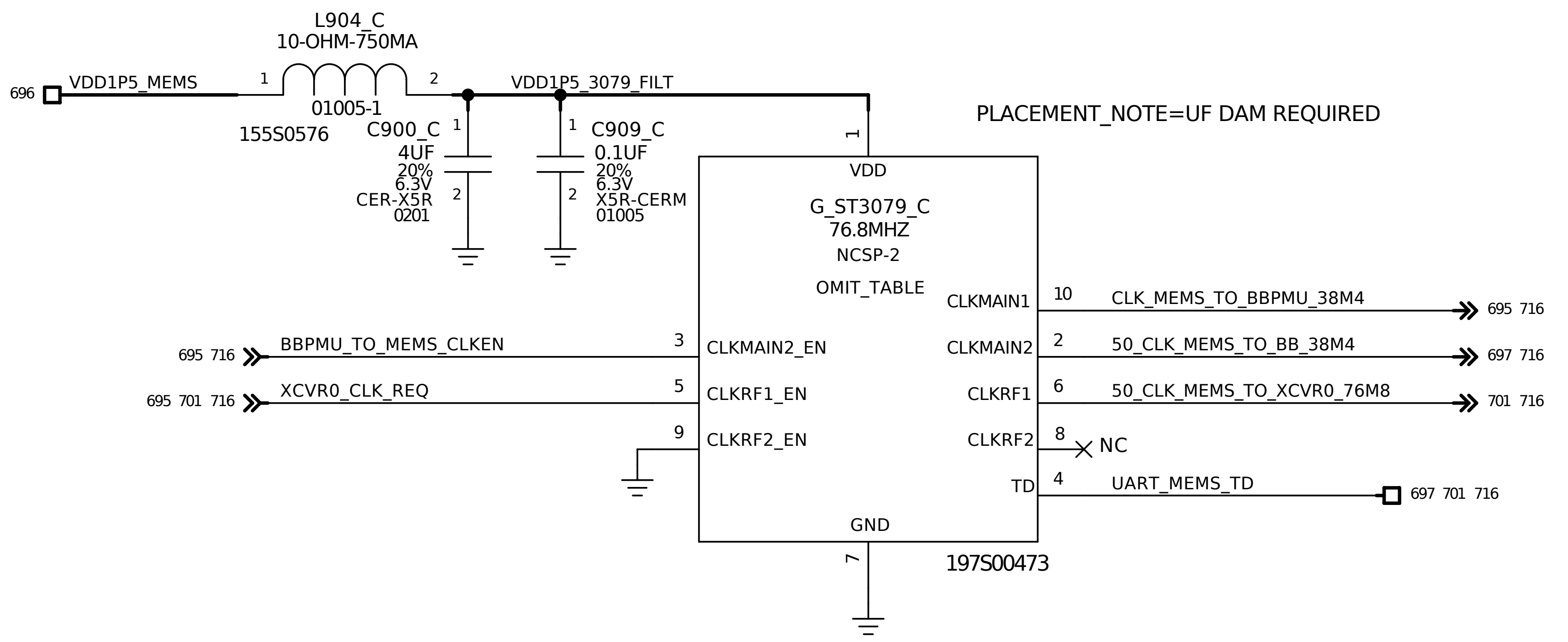
CLOCKING

PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
197S00457	SIT3079PKG:SMALL	G_ST3079_C	CRITICAL	1	OSC,MEMS,76.8MHZ,4-OUT,CSP10
197S00473	SIT3079PKG:LARGE	G_ST3079_C	CRITICAL	1	OSC,MEMS,76.8MHZ,4-OUT,CSP10

MEMS SIT3079


L904_C
10-OHM-750MA
01005-1
155S0576
696
VDD1P5_MEMS
1
2
VDD1P5_3079_FILT
C900_C
4UF
20%
6.3V
CER-X5R
0201
C909_C
0.1UF
20%
6.3V
X5R-CERM
01005
PLACEMENT_NOTE=UF DAM REQUIRED
VDD
G_ST3079_C
76.8MHZ
NCSP-2
OMIT_TABLE
CLKMAIN1
CLKMAIN2
CLKRF1
CLKRF2
TD
CLKMAIN2_EN
CLKRF1_EN
CLKRF2_EN
GND
197S00473
10 CLK_MEMS_TO_BBPMU_38M4 695 716
2 50_CLK_MEMS_TO_BB_38M4 697 716
6 50_CLK_MEMS_TO_XCVR0_76M8 701 716
8 NC
4 UART_MEMS_TD 697 701 716
695 716 BBPMU_TO_MEMS_CLKEN 3
695 701 716 XCVR0_CLK_REQ 5
9
7

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CLOCKING (9)

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CONTROL
U_CARPO_C
TMQU16C0-P1
FCCSP
SYM 4 OF 7
I/O
998-33285
697 716 85_MPHY_XCVR0_TO_BB_RX0_P Y4 MPHY_RX0_DAT
697 716 85_MPHY_XCVR0_TO_BB_RX0_N W3 MPHY_RX0_DATX
697 85_MPHY_XCVR0_TO_BB_RX1_P AB4 MPHY_RX1_DAT
697 85_MPHY_XCVR0_TO_BB_RX1_N AA3 MPHY_RX1_DATX
697 85_MPHY_XCVR0_TO_BB_RX2_P AD4 MPHY_RX2_DAT
697 85_MPHY_XCVR0_TO_BB_RX2_N AE3 MPHY_RX2_DATX
697 85_MPHY_XCVR0_TO_BB_RX3_P AC3 MPHY_RX3_DAT
697 85_MPHY_XCVR0_TO_BB_RX3_N AC5 MPHY_RX3_DATX
697 716 85_MPHY_BB_TO_XCVR0_TX0_P AG3 MPHY_TX0_DAT
697 716 85_MPHY_BB_TO_XCVR0_TX0_N AG1 MPHY_TX0_DATX
NC W1 MPHY_TST
697 716 DWB_SCLK R13 DWB_SCLK
697 716 DWB_SDAT T12 DWB_SDATA
700 716 50_CLK_MEMS_TO_XCVR0_76M8 V22 FSYS_CLK
695 700 716 XCVR0_CLK_REQ M10 FSYS_REQ
NC P18 HSCLOCK_TEST
NC U17 REFCLOCK_TEST
L17 JTAG_SEL
693 695 697 716 SWD_NUB_TO_BB_SWCLK L19 JTAG_TCK
NC M16 JTAG_TDI
NC P16 JTAG_TDO
693 695 697 716 SWD_NUB_BI_BB_SWDIO M20 JTAG_TMS
697 716 XCVR0_RESET_L N15 RESET*
AD14 FUSE_BLOW
MRFFE0_SCLK N23 XCVR0_RFFE0_LRX_SCLK_R
MRFFE0_SDATA P22 XCVR0_RFFE0_LRX_SDAT_R
MRFFE1_SCLK N21 XCVR0_RFFE1_LTX_SCLK_R
MRFFE1_SDATA P20 XCVR0_RFFE1_LTX_SDAT_R
MRFFE2_SCLK P26 XCVR0_RFFE2_URX_SCLK_R
MRFFE2_SDATA R27 XCVR0_RFFE2_URX_SDAT_R
MRFFE3_SCLK N25 XCVR0_RFFE3_UTX_SCLK_R
MRFFE3_SDATA P24 XCVR0_RFFE3_UTX_SDAT_R
MRFFE4_SCLK T26 NC
MRFFE4_SDATA U27 NC
MRFFE5_SCLK V26 NC
MRFFE5_SDATA W27 NC
GPO2 N29 NC
GPO3 M28 NC
GPO4 M24 NC
GPO5 U29 XCVR0_GPO5_R 714
GPO6 T28 NC
R1001_C 0 0% 1/32W TK 01005
R1002_C 0 0% 1/32W TK 01005
R1003_C 0 0% 1/32W TK 01005
R1004_C 0 0% 1/32W TK 01005
R1005_C 0 0% 1/32W TK 01005
R1006_C 0 0% 1/32W TK 01005
R1007_C 0 0% 1/32W TK 01005
R1008_C 0 0% 1/32W TK 01005
1 2
XCVR0_RFFE0_LRX_SCLK 693 705 706 707
XCVR0_RFFE0_LRX_SDAT 693 705 706 707
XCVR0_RFFE1_LTX_SCLK 693 703 705 706 708
XCVR0_RFFE1_LTX_SDAT 693 703 705 706 708
XCVR0_RFFE2_URX_SCLK 709 710 711
XCVR0_RFFE2_URX_SDAT 709 710 711
XCVR0_RFFE3_UTX_SCLK 703 709 713
XCVR0_RFFE3_UTX_SDAT 703 709 713
GNSS
U_CARPO_C
TMQU16C0-P1
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SYM 5 OF 7
GNSS
998-33285
R1010_C 0 0% 1/32W TK 01005
712 50_XCVR0_GNSS_L1 L1 GN_RF_IN_L1
712 50_XCVR0_GNSS_L5 R1 GN_RF_IN_L5
695 697 716 CLK32K_BB_XCVR0 CLK32K_XCVR0_GNSS P8 GN_LPO_CLK
697 700 716 UART_MEMS_TD R7 GN_MEMS_UART_RX
697 716 BB_TO_GNSS_TIMEMARK N13 GN_TIMEMARK
K2 GN_RF_TST_L1
T2 GN_RF_TST_L5
GN_ANT_SEL M12 NC
GN_IF_TST_N P4 NC
GN_IF_TST_P M4 NC
GN_LNA_EN_L1 U11 XCVR0_L1_LNA_EN 712 716
GN_LNA_EN_L5 U7 XCVR0_L5_LNA_EN 712 716
COMM_REQ R9 XCVR0_DWB_IRQ 697 716
GN_SPI_SCLK R11 SPI1_AOP_TO_GNSS_SCLK 693 716
GN_SPI_MISO T14 SPI1_AOP_FROM_GNSS_MISO 693 716
GN_SPI_MOSI N19 SPI1_AOP_TO_GNSS_MOSI 693 716
GN_SPI_SS R29 GPIO_SCM_AOP_TO_GNSS_SPI_CS_L 693 716
GN_SPI_IRQ U25 GPIO_AOP_FROM_GNSS_HOST_REQ 693 716
TX
U_CARPO_C
TMQU16C0-P1
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SYM 3 OF 7
TX
998-33285
708 50_XCVR0_FBR1_1 Y12 FBR1_1
713 50_XCVR0_FBR1_2 AA13 FBR1_2
708 50_XCVR0_FBR2_1 AA17 FBR2_1
713 50_XCVR0_FBR2_2 Y16 FBR2_2
AB20 FBR3_1
Y20 FBR3_2
NC AC13 FBR2_ADC_IN_N
NC AB14 FBR2_ADC_IN_P
TX0_2G AK12 50_XCVR0_TX0_2G 693
TX1_LB AK10 50_XCVR0_TX1_LB 693
TX1_LMB AK2 NC
TX1_MBHB1 AK4 50_XCVR0_TX1_MBHB1 705
TX1_MBHB2 AL5 50_XCVR0_TX1_MBHB2 709
TX1_UHB1 AK8 50_XCVR0_TX1_UHB1 706
TX1_UHB2 AL7 NC
TX2_LB AK20 50_XCVR0_TX2_LB 693
TX2_LMB AK18 NC
TX2_MBHB AL25 50_XCVR0_TX2_MBHB 705
TX2_UHB AK28 50_XCVR0_TX2_UHB 706
TX2_CB1 AL23 50_XCVR0_TX2_CB1 706
TX2_CB2 AK22 NC
TX3_HB AB26 NC
TX3_UHB AA25 NC
TX3_CB1 AA29 NC
TX3_CB2 AB28 NC
ET1_1N AJ15 100_XCVR0_ET1_1N 703 716
ET1_1P AJ17 100_XCVR0_ET1_1P 703 716
ET1_2N AL15 100_XCVR0_ET1_2N 703 716
ET1_2P AL17 100_XCVR0_ET1_2P 703 716
ET2_1N AF28 100_XCVR0_ET2_1N 703 716
ET2_1P AE29 100_XCVR0_ET2_1P 703 716
ET3_1N AC23 NC
ET3_1P AB22 NC
RX
U_CARPO_C
TMQU16C0-P1
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SYM 2 OF 7
RX
998-33285
709 50_XCVR0_RX1 A5 RX1
705 50_XCVR0_RX2 G5 RX2
711 50_XCVR0_RX3 B6 RX3
707 50_XCVR0_RX4 F6 RX4
709 50_XCVR0_RX5 A7 RX5
705 50_XCVR0_RX6 G7 RX6
711 50_XCVR0_RX7 A9 RX7
707 50_XCVR0_RX8 G9 RX8
710 50_XCVR0_RX9 B10 RX9
706 50_XCVR0_RX10 F10 RX10
710 50_XCVR0_RX11 B12 RX11
706 50_XCVR0_RX12 F12 RX12
710 50_XCVR0_RX13 A13 RX13
706 50_XCVR0_RX14 G13 RX14
710 50_XCVR0_RX15 B14 RX15
706 50_XCVR0_RX16 F14 RX16
A15 RX17
G15 RX18
B16 RX19
F16 RX20
709 50_XCVR0_RX21 A21 RX21
705 50_XCVR0_RX22 G21 RX22
711 50_XCVR0_RX23 B22 RX23
707 50_XCVR0_RX24 F22 RX24
709 50_XCVR0_RX25 A23 RX25
705 50_XCVR0_RX26 G23 RX26
711 50_XCVR0_RX27 B24 RX27
707 50_XCVR0_RX28 F24 RX28
711 50_XCVR0_RX29 A25 RX29
693 50_XCVR0_RX30 G25 RX30
B26 RX31
F26 RX32
NC L25 RX_TST1_CLK
NC N27 RX_TST1_N
NC M26 RX_TST1_P
NC N7 RX_TST2_CLK
NC N9 RX_TST2_N
NC M8 RX_TST2_P

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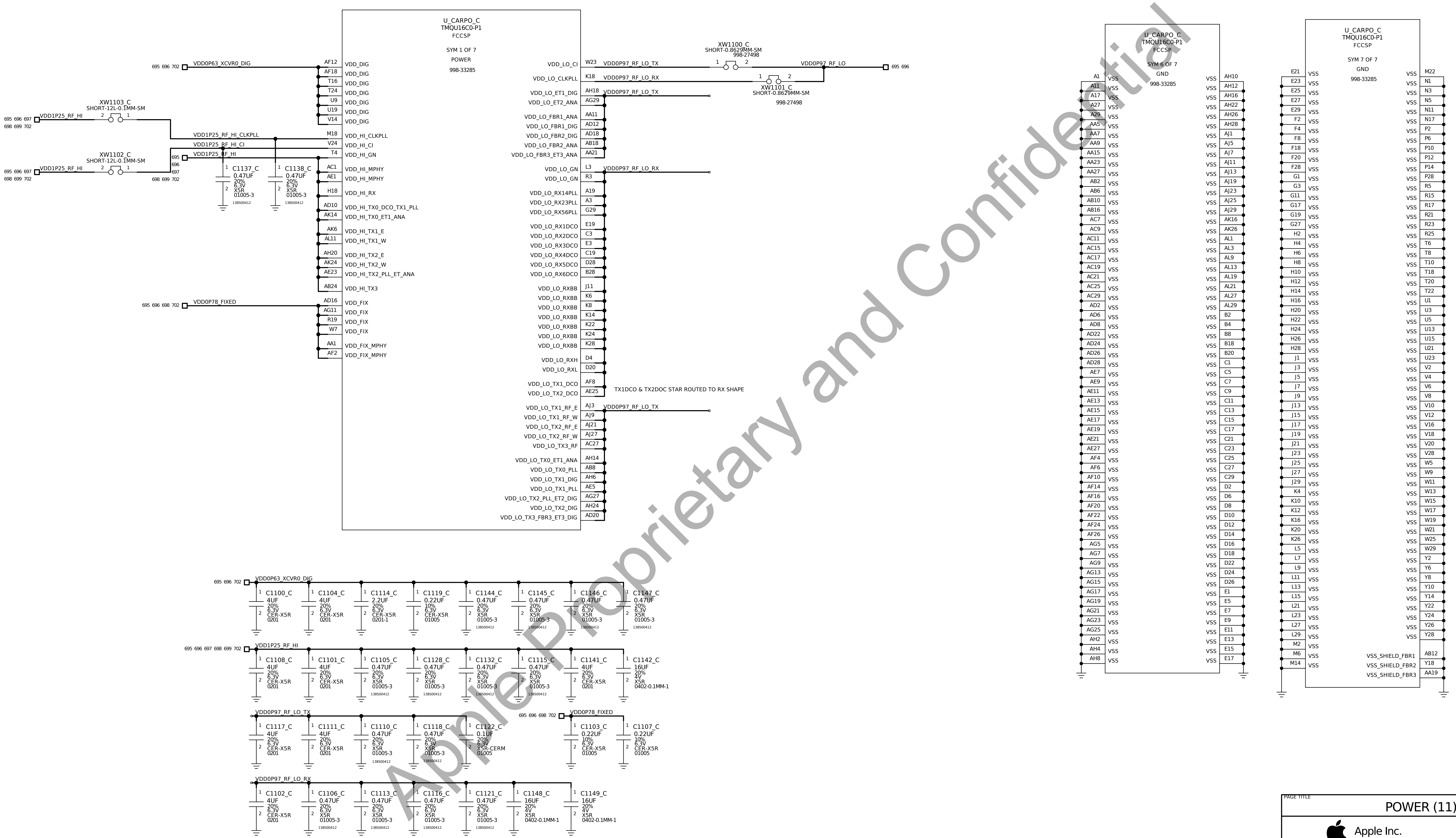

U_CARPO_C
TMQU16C0-P1
FCCSP
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POWER
998-33285
VDD0P63_XCVR0_DIG
VDD_DIG
VDD1P25_RF_HI
VDD1P25_RF_HI_CLKPLL
VDD1P25_RF_HI_CI
VDD1P25_RF_HI
VDD_HI_CLKPLL
VDD_HI_CI
VDD_HI_GN
VDD_HI_MPHY
VDD_HI_RX
VDD_HI_TX0_DCO_TX1_PLL
VDD_HI_TX0_ET1_ANA
VDD_HI_TX1_E
VDD_HI_TX1_W
VDD_HI_TX2_E
VDD_HI_TX2_W
VDD_HI_TX2_PLL_ET_ANA
VDD_HI_TX3
VDD0P78_FIXED
VDD_FIX
VDD_FIX_MPHY
XW1103_C
SHORT-12L-0.1MM-SM
XW1102_C
SHORT-12L-0.1MM-SM
C1137_C
0.47UF
C1138_C
0.47UF
XW1100_C
SHORT-0.8629MM-SM
998-27498
XW1101_C
SHORT-0.8629MM-SM
998-27498
VDD0P97_RF_LO_TX
VDD0P97_RF_LO_RX
VDD0P97_RF_LO
VDD_LO_CI
VDD_LO_CLKPLL
VDD_LO_ET1_DIG
VDD_LO_ET2_ANA
VDD_LO_FBR1_ANA
VDD_LO_FBR1_DIG
VDD_LO_FBR2_DIG
VDD_LO_FBR2_ANA
VDD_LO_FBR3_ET3_ANA
VDD_LO_GN
VDD_LO_RX14PLL
VDD_LO_RX23PLL
VDD_LO_RX56PLL
VDD_LO_RX1DCO
VDD_LO_RX2DCO
VDD_LO_RX3DCO
VDD_LO_RX4DCO
VDD_LO_RX5DCO
VDD_LO_RX6DCO
VDD_LO_RXBB
VDD_LO_RXH
VDD_LO_RXL
VDD_LO_TX1_DCO
VDD_LO_TX2_DCO
TX1DCO & TX2DOC STAR ROUTED TO RX SHAPE
VDD_LO_TX1_RF_E
VDD_LO_TX1_RF_W
VDD_LO_TX2_RF_E
VDD_LO_TX2_RF_W
VDD_LO_TX3_RF
VDD_LO_TX0_ET1_ANA
VDD_LO_TX0_PLL
VDD_LO_TX1_DIG
VDD_LO_TX1_PLL
VDD_LO_TX2_PLL_ET2_DIG
VDD_LO_TX2_DIG
VDD_LO_TX3_FBR3_ET3_DIG
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VSS
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TMQU16C0-P1
FCCSP
SYM 7 OF 7
GND
998-33285
VSS
VSS_SHIELD_FBR1
VSS_SHIELD_FBR2
VSS_SHIELD_FBR3
VDD0P63_XCVR0_DIG
C1100_C 4UF
C1104_C 4UF
C1114_C 2.2UF
C1119_C 0.22UF
C1144_C 0.47UF
C1145_C 0.47UF
C1146_C 0.47UF
C1147_C 0.47UF
VDD1P25_RF_HI
C1108_C 4UF
C1101_C 4UF
C1105_C 0.47UF
C1128_C 0.47UF
C1132_C 0.47UF
C1115_C 0.47UF
C1141_C 4UF
C1142_C 16UF
VDD0P97_RF_LO_TX
C1117_C 4UF
C1111_C 4UF
C1110_C 0.47UF
C1118_C 0.47UF
C1122_C 0.1UF
VDD0P78_FIXED
C1103_C 0.22UF
C1107_C 0.22UF
VDD0P97_RF_LO_RX
C1102_C 4UF
C1106_C 0.47UF
C1113_C 0.47UF
C1116_C 0.47UF
C1121_C 0.47UF
C1148_C 16UF
C1149_C 16UF

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POWER (11)

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LAT
PP_VDD_MAIN_ETIC
693 703
H9 D9 H3 D3
AVDDA AVDDB PVDDA PVDDB
C1217_C 10UF 20% 10V X5R-CERM 0402-0.1MM
C1218_C 0.1UF 10% 10V X6S-CERM 0201
C1219_C 0.1UF 10% 10V X6S-CERM 0201
C1224_C 0.1UF REMOVED
C1226_C 0.1UF 10% 10V X6S-CERM 0201
U_LETIC_C
QM81026
LGA
SYM 1 OF 2
TESTA
CLK1
DATA1
VIO
TESTB
CLK2
DATA2
USID
DPA_AIO
VRAMPO_P
VRAMPO_M
VRAMP1_P
VRAMP1_M
VRAMP2_P
VRAMP2_M
AGND_NOTCHA
AGND_NOTCHB
PSUB1
PSUB2
XCVR0_RFFE1_LTX_SCLK
XCVR0_RFFE1_LTX_SDAT
VDD_RFFE_VIO
50_VDPA_AIO
100_XCVR0_ET2_1P
100_XCVR0_ET2_1N
100_XCVR0_ET1_1P
100_XCVR0_ET1_1N
693 696 703 705 706 707 708 709 710 711 713 716
C1216_C 1000PF 10% 10V X5R 01005
C1227_C 0.01UF 10% 10V X5R 01005
VCCA
VPARAMPA
LXA
N1A1 N1A2 N2A1 N2A2 N1C N2C N1B1 N1B2 N2B1 N2B2
VBATAMP_H
VBATAMP_L
ULX
LXB
VPARAMPB
VCCB
VPAL_ET_A
VPAL_VPARAMPA
VPAL_LXA
VPAL_N1A1 VPAL_N1A2 VPAL_N2A1 VPAL_N2A2 VPAL_N1C VPAL_N2C VPAL_N1B1 VPAL_N1B2 VPAL_N2B1 VPAL_N2B2
VPAL_VBATAMP_H
VPAL_VBATAMP_L
VPAL_ULX
VPAL_LXB
VPAL_VPARAMPB
VPAL_ET_B
C1200_C 2.2UF 10% 10V CER-X7S 0402 COFFSETA
L1200_C 2.2UH-20%-0.8A-0.269OHM PSYA2016-SM
DIDT=TRUE
C1201_C 4.7UF 10% 10V X5R 0402 CA1
C1205_C 4.7UF 10% 10V X5R 0402 CA2
C1204_C 4.7UF 10% 10V X5R 0402 CULBBFLY
C1202_C 4.7UF 10% 10V X5R 0402 CB1
C1206_C 4.7UF 10% 10V X5R 0402 CB2
C1207_C 2.2UF 20% 6.3V X5R-CERM 0201 CVBATAMPH
L1203_C 1UH-20%-1.1A-0.278OHM PIBA1005FE-SM LULBB
L1202_C 2.2UH-20%-0.8A-0.269OHM PSYA2016-SM
C1220_C 2.2UF 10% 10V CER-X7S 0402 CVBATAMPL
C1203_C 2.2UF 10% 10V CER-X7S 0402
VCC_AUXP VCC_AUXQ VCC_AUXR VCC_AUXT VCC_AUXU PVDD2G VCC2G
339S00849
USID 0XC
USID 0XD
VPA_AUXP_ET_TXDSM
VPA_ET_LB
VPA_ET_LUHB
VPA_ET_HB
PP_VDD_MAIN_ETIC
VPA_2G
C1234_C 4UF 20% 6.3V CER-X5R 0201
U_LETIC_C
QM81026
LGA
SYM2 OF 2
339S00849
AGND
PGND
UAT DPA
PP_VDD_MAIN_DPA
693
AVDD
C1223_C 0.1UF 10% 10V X6S-CERM 0201
U_UETIC_C
QM81027
LGA
TEST
VIO
CLK
DATA
USID
VRAMP1P
VRAMP1M
VRAMP2P
VRAMP2M
AUXS
AUXV
DPA_AIO
VCC
VPARAMP
VBATAMPH
VDD_RFFE_VIO
XCVR0_RFFE3_UTX_SCLK
XCVR0_RFFE3_UTX_SDAT
100_XCVR0_ET1_2P
100_XCVR0_ET1_2N
C1221_C 1000PF 10% 10V X5R 01005
50_VDPA_AIO
VPA_AUXP_ET_TXDSM
VDPA_VPARAMP
VPAL_VBATAMP_L
C1225_C 2.2UF 10% 10V CER-X7S 0402
C1215_C 1.0UF 10% 25V X6S 0402
GND
353S02619
USID 0XB
NC

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LB+2G SPAD

HIER_RADIO_S_CG

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FR1 LAT LB/2G SPAD (13)

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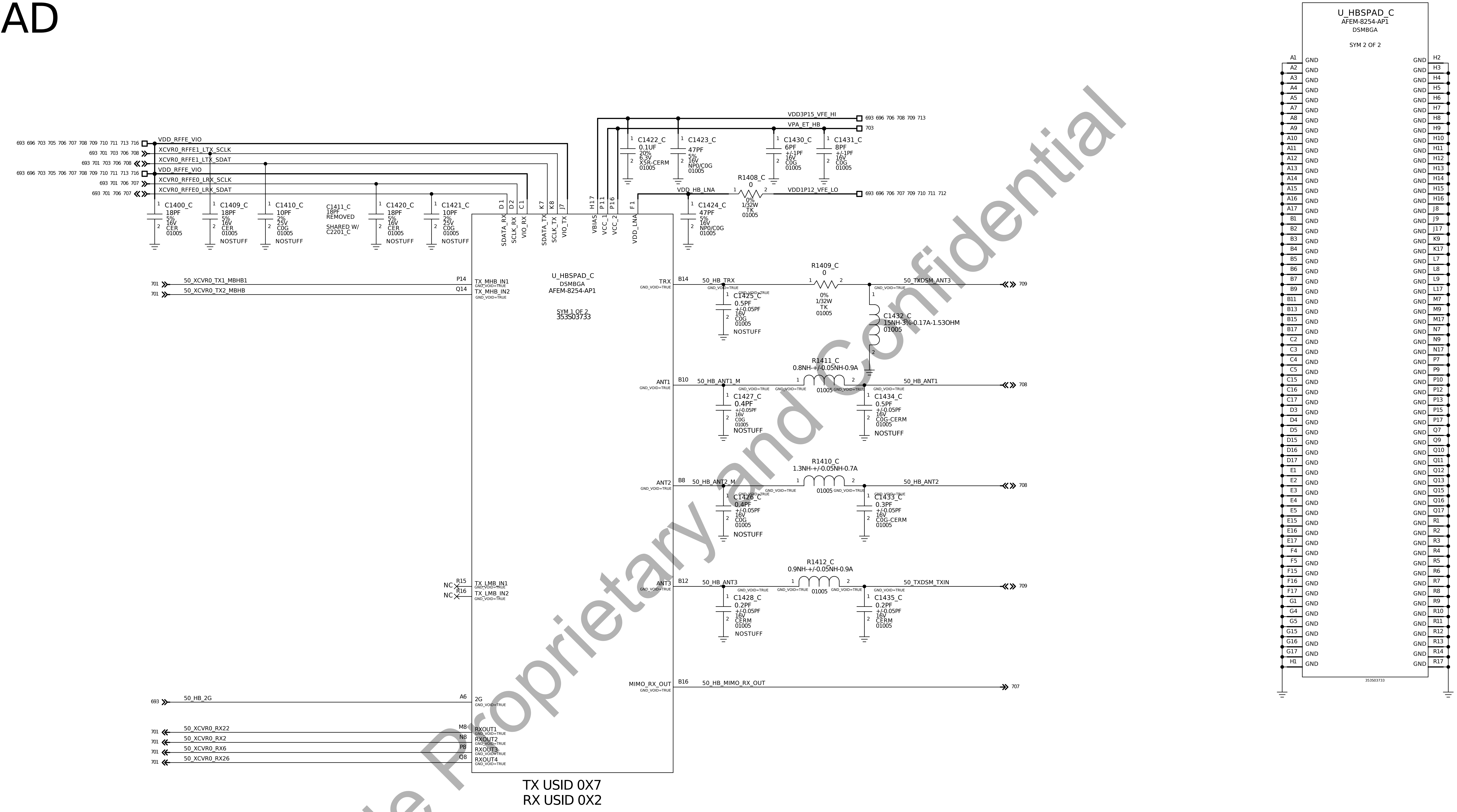
HB SPAD


U_HBSPAD_C
AFEM-8254-AP1
DSMBGA
SYM 1 OF 2
353S03733
SYM 2 OF 2
VDD_RFFE_VIO
XCVR0_RFFE1_LTX_SCLK
XCVR0_RFFE1_LTX_SDAT
XCVR0_RFFE0_LRX_SCLK
XCVR0_RFFE0_LRX_SDAT
VDD3P15_VFE_HI
VPA_ET_HB
VDD_HB_LNA
VDD1P12_VFE_LO
C1400_C 18PF 5% 16V CER 01005
C1409_C 18PF 5% 16V CER 01005 NOSTUFF
C1410_C 10PF 2% 25V C0G 01005 NOSTUFF
C1411_C 18PF REMOVED SHARED W/ C2201_C
C1420_C 18PF 5% 16V CER 01005 NOSTUFF
C1421_C 10PF 2% 25V C0G 01005 NOSTUFF
C1422_C 0.1UF 20% 6.3V X5R-CERM 01005
C1423_C 47PF 5% 16V NP0/C0G 01005
C1430_C 6PF +/-1PF 16V C0G 01005
C1431_C 8PF +/-1PF 16V C0G 01005
R1408_C 0 0% 1/32W TK 01005
C1424_C 47PF 5% 16V NP0/C0G 01005
SDATA_RX SCLK_RX VIO_RX SDATA_TX SCLK_TX VIO_TX VBIAS VCC_1 VCC_2 VDD_LNA
50_XCVR0_TX1_MBHB1
50_XCVR0_TX2_MBHB
TX_MHB_IN1
TX_MHB_IN2
TRX
50_HB_TRX
R1409_C 0 0% 1/32W TK 01005
50_TXDSM_ANT3
C1425_C 0.5PF +/-0.05PF 16V C0G 01005 NOSTUFF
C1432_C 15NH-3%-0.17A-1.53OHM 01005
ANT1
50_HB_ANT1_M
R1411_C 0.8NH-+/-0.05NH-0.9A 01005
50_HB_ANT1
C1427_C 0.4PF +/-0.05PF 16V C0G 01005 NOSTUFF
C1434_C 0.5PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF
ANT2
50_HB_ANT2_M
R1410_C 1.3NH-+/-0.05NH-0.7A 01005
50_HB_ANT2
C1426_C 0.4PF +/-0.05PF 16V C0G 01005 NOSTUFF
C1433_C 0.3PF +/-0.05PF 16V C0G-CERM 01005
ANT3
50_HB_ANT3
R1412_C 0.9NH-+/-0.05NH-0.9A 01005
50_TXDSM_TXIN
C1428_C 0.2PF +/-0.05PF 16V CERM 01005 NOSTUFF
C1435_C 0.2PF +/-0.05PF 16V CERM 01005
TX_LMB_IN1
TX_LMB_IN2
NC
MIMO_RX_OUT
50_HB_MIMO_RX_OUT
50_HB_2G
2G
50_XCVR0_RX22
50_XCVR0_RX2
50_XCVR0_RX6
50_XCVR0_RX26
RXOUT1 RXOUT2 RXOUT3 RXOUT4
GND_VOID=TRUE
GND

TX USID 0X7
RX USID 0X2

PAGE TITLE
FR1 LAT HB SPAD (14)

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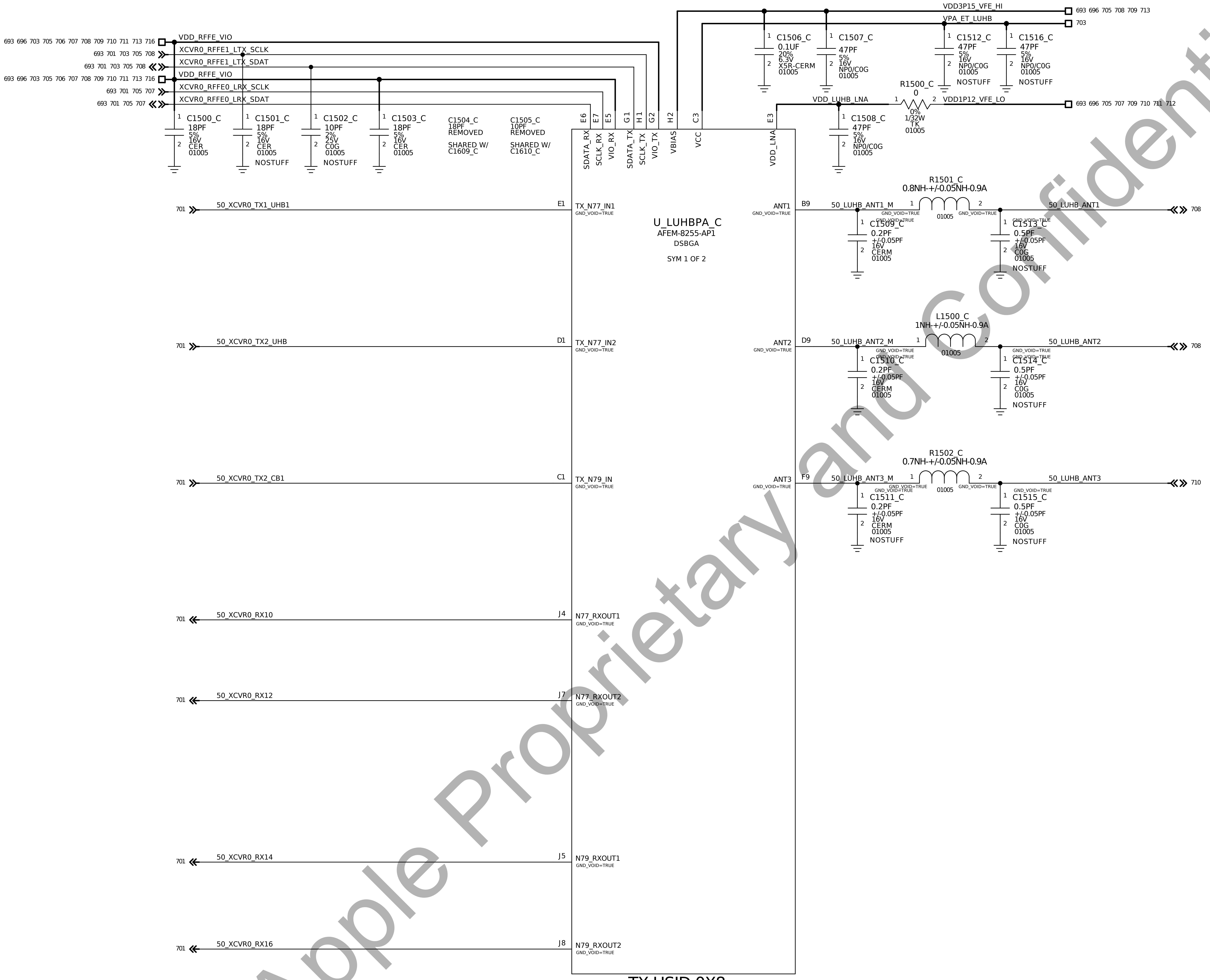
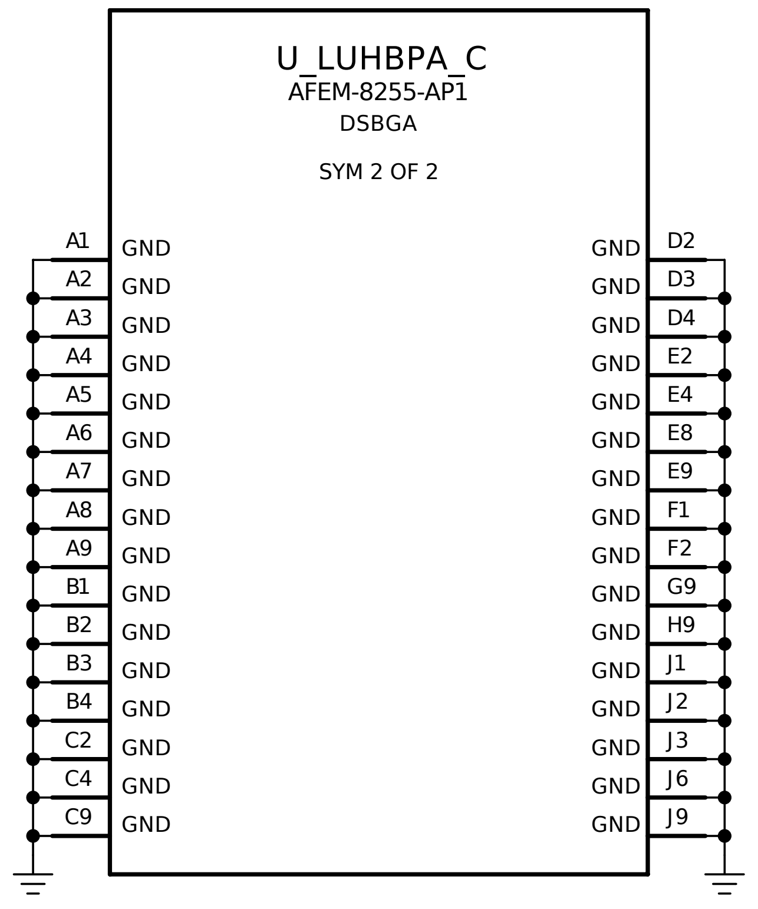
FR1 LAT UHB SPAD


693 696 703 705 706 707 708 709 710 711 713 716
VDD_RFFE_VIO
693 701 703 705 708
XCVR0_RFFE1_LTX_SCLK
693 701 703 705 708
XCVR0_RFFE1_LTX_SDAT
693 696 703 705 706 707 708 709 710 711 713 716
VDD_RFFE_VIO
693 701 705 707
XCVR0_RFFE0_LRX_SCLK
693 701 705 707
XCVR0_RFFE0_LRX_SDAT
C1500_C 18PF 5% 16V CER 01005
C1501_C 18PF 5% 16V CER 01005 NOSTUFF
C1502_C 10PF 2% 25V C0G 01005 NOSTUFF
C1503_C 18PF 5% 16V CER 01005
C1504_C 18PF REMOVED SHARED W/ C1609_C
C1505_C 10PF REMOVED SHARED W/ C1610_C
VDD3P15_VFE_HI
693 696 705 708 709 713
VPA_ET_LUHB
703
C1506_C 0.1UF 20% 6.3V X5R-CERM 01005
C1507_C 47PF 5% 16V NP0/C0G 01005
C1512_C 47PF 5% 16V NP0/C0G 01005 NOSTUFF
C1516_C 47PF 5% 16V NP0/C0G 01005 NOSTUFF
R1500_C 0 0% 1/32W TK 01005
VDD_LUHB_LNA
VDD1P12_VFE_LO
693 696 705 707 709 710 711 712
C1508_C 47PF 5% 16V NP0/C0G 01005
E6 SDATA_RX
E7 SCLK_RX
E5 VIO_RX
G1 SDATA_TX
H1 SCLK_TX
G2 VIO_TX
H2 VBIAS
C3 VCC
E3 VDD_LNA
U_LUHBPA_C
AFEM-8255-AP1
DSBGA
SYM 1 OF 2
701 50_XCVR0_TX1_UHB1 E1 TX_N77_IN1 GND_VOID=TRUE
701 50_XCVR0_TX2_UHB D1 TX_N77_IN2 GND_VOID=TRUE
701 50_XCVR0_TX2_CB1 C1 TX_N79_IN GND_VOID=TRUE
701 50_XCVR0_RX10 J4 N77_RXOUT1 GND_VOID=TRUE
701 50_XCVR0_RX12 J7 N77_RXOUT2 GND_VOID=TRUE
701 50_XCVR0_RX14 J5 N79_RXOUT1 GND_VOID=TRUE
701 50_XCVR0_RX16 J8 N79_RXOUT2 GND_VOID=TRUE
ANT1 GND_VOID=TRUE B9 50_LUHB_ANT1_M
R1501_C 0.8NH-+/-0.05NH-0.9A 01005
50_LUHB_ANT1 708
C1509_C 0.2PF +/-0.05PF 16V CERM 01005
C1513_C 0.5PF +/-0.05PF 16V C0G 01005 NOSTUFF
ANT2 GND_VOID=TRUE D9 50_LUHB_ANT2_M
L1500_C 1NH-+/-0.05NH-0.9A 01005
50_LUHB_ANT2 708
C1510_C 0.2PF +/-0.05PF 16V CERM 01005
C1514_C 0.5PF +/-0.05PF 16V C0G 01005 NOSTUFF
ANT3 GND_VOID=TRUE F9 50_LUHB_ANT3_M
R1502_C 0.7NH-+/-0.05NH-0.9A 01005
50_LUHB_ANT3 710
C1511_C 0.2PF +/-0.05PF 16V CERM 01005 NOSTUFF
C1515_C 0.5PF +/-0.05PF 16V C0G 01005 NOSTUFF
GND_VOID=TRUE

TX USID 0X8
RX USID 0X3


U_LUHBPA_C
AFEM-8255-AP1
DSBGA
SYM 2 OF 2
A1 GND
A2 GND
A3 GND
A4 GND
A5 GND
A6 GND
A7 GND
A8 GND
A9 GND
B1 GND
B2 GND
B3 GND
B4 GND
C2 GND
C4 GND
C9 GND
GND D2
GND D3
GND D4
GND E2
GND E4
GND E8
GND E9
GND F1
GND F2
GND G9
GND H9
GND J1
GND J2
GND J3
GND J6
GND J9

PAGE TITLE

FR1 LAT UHB SPAD (15)

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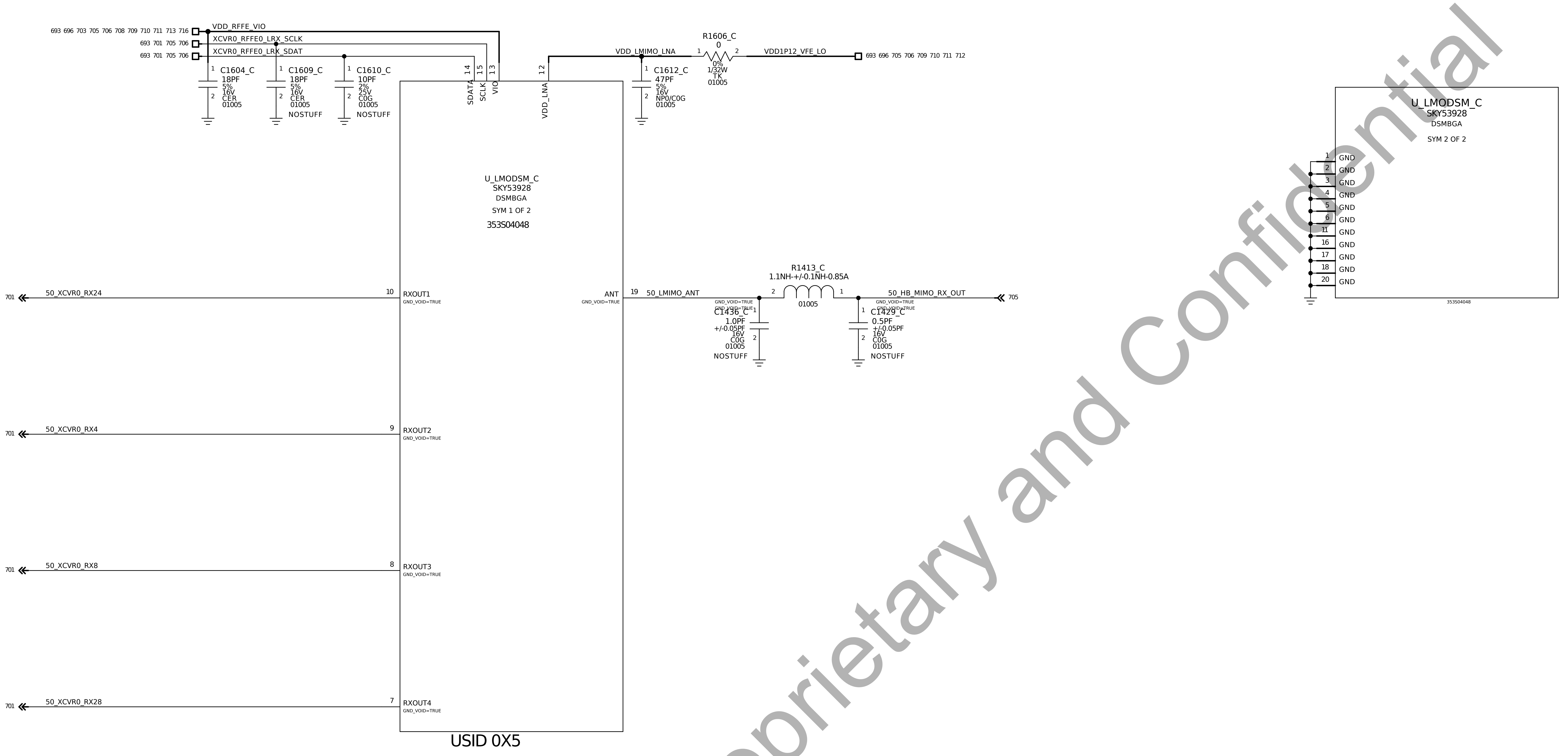
FR1 LAT MIMO DSM


693 696 703 705 706 708 709 710 711 713 716
VDD_RFFE_VIO
693 701 705 706
XCVR0_RFFE0_LRX_SCLK
693 701 705 706
XCVR0_RFFE0_LRX_SDAT
C1604_C
18PF
5%
16V
CER
01005
C1609_C
18PF
5%
16V
CER
01005
NOSTUFF
C1610_C
10PF
2%
25V
C0G
01005
NOSTUFF
14 SDATA
15 SCLK
13 VIO
12 VDD_LNA
VDD_LMIMO_LNA
C1612_C
47PF
5%
16V
NP0/C0G
01005
R1606_C
0
0%
1/32W
TK
01005
VDD1P12_VFE_LO
693 696 705 706 709 710 711 712
U_LMODSM_C
SKY53928
DSMBGA
SYM 1 OF 2
353S04048
701
50_XCVR0_RX24
10 RXOUT1
GND_VOID=TRUE
701
50_XCVR0_RX4
9 RXOUT2
GND_VOID=TRUE
701
50_XCVR0_RX8
8 RXOUT3
GND_VOID=TRUE
701
50_XCVR0_RX28
7 RXOUT4
GND_VOID=TRUE
USID 0X5
ANT
GND_VOID=TRUE
19
50_LMIMO_ANT
R1413_C
1.1NH-+/-0.1NH-0.85A
01005
50_HB_MIMO_RX_OUT
705
GND_VOID=TRUE
GND_VOID=TRUE
C1436_C
1.0PF
+/-0.05PF
16V
C0G
01005
NOSTUFF
GND_VOID=TRUE
GND_VOID=TRUE
C1429_C
0.5PF
+/-0.05PF
16V
C0G
01005
NOSTUFF
U_LMODSM_C
SKY53928
DSMBGA
SYM 2 OF 2
1 GND
2 GND
3 GND
4 GND
5 GND
6 GND
11 GND
16 GND
17 GND
18 GND
20 GND
353S04048

PAGE TITLE

FR1 LAT MIMO DSM (16)

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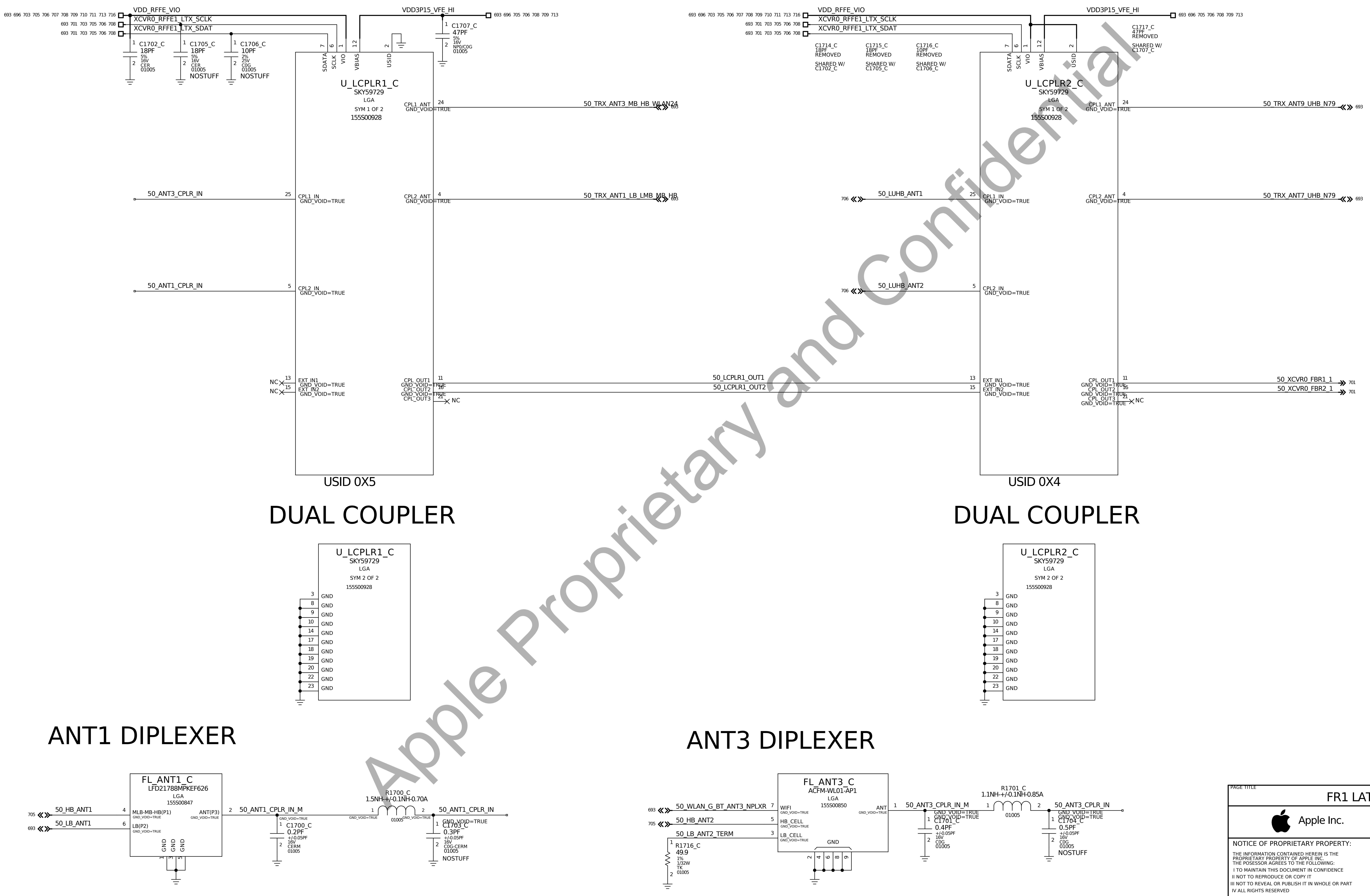
FR1 LAT COUPLERS


VDD_RFFE_VIO
XCVR0_RFFE1_LTX_SCLK
XCVR0_RFFE1_LTX_SDAT
VDD3P15_VFE_HI
C1702_C 18PF
C1705_C 18PF NOSTUFF
C1706_C 10PF NOSTUFF
C1707_C 47PF
U_LCPLR1_C
SKY59729
LGA
SYM 1 OF 2
155S00928
SDATA
SCLK
VIO
VBIAS
USID
CPL1_ANT
CPL2_ANT
CPL1_IN
CPL2_IN
EXT_IN1
EXT_IN2
CPL_OUT1
CPL_OUT2
CPL_OUT3
GND_VOID=TRUE
NC
50_TRX_ANT3_MB_HB_WLAN24
50_TRX_ANT1_LB_LMB_MB_HB
50_ANT3_CPLR_IN
50_ANT1_CPLR_IN
50_LCPLR1_OUT1
50_LCPLR1_OUT2
USID 0X5
DUAL COUPLER
C1714_C 18PF REMOVED SHARED W/ C1702_C
C1715_C 18PF REMOVED SHARED W/ C1705_C
C1716_C 10PF REMOVED SHARED W/ C1706_C
C1717_C 47PF REMOVED SHARED W/ C1707_C
U_LCPLR2_C
SKY59729
LGA
SYM 1 OF 2
155S00928
50_TRX_ANT9_UHB_N79
50_TRX_ANT7_UHB_N79
50_LUHB_ANT1
50_LUHB_ANT2
50_XCVR0_FBR1_1
50_XCVR0_FBR2_1
USID 0X4
DUAL COUPLER
U_LCPLR1_C SKY59729 LGA SYM 2 OF 2 155S00928
U_LCPLR2_C SKY59729 LGA SYM 2 OF 2 155S00928
GND
ANT1 DIPLEXER
FL_ANT1_C
LFD21788MPKEF626
LGA
155S00847
MLB-MB-HB(P1)
LB(P2)
ANT(P3)
50_HB_ANT1
50_LB_ANT1
50_ANT1_CPLR_IN_M
C1700_C 0.2PF
R1700_C 1.5NH-+/-0.1NH-0.70A
C1703_C 0.3PF NOSTUFF
50_ANT1_CPLR_IN
ANT3 DIPLEXER
FL_ANT3_C
ACFM-WL01-AP1
LGA
155S00850
WIFI
HB_CELL
LB_CELL
ANT
50_WLAN_G_BT_ANT3_NPLXR
50_HB_ANT2
50_LB_ANT2_TERM
R1716_C 49.9
50_ANT3_CPLR_IN_M
C1701_C 0.4PF
R1701_C 1.1NH-+/-0.1NH-0.85A
C1704_C 0.5PF NOSTUFF
50_ANT3_CPLR_IN

PAGE TITLE

FR1 LAT COUPLERS (17)

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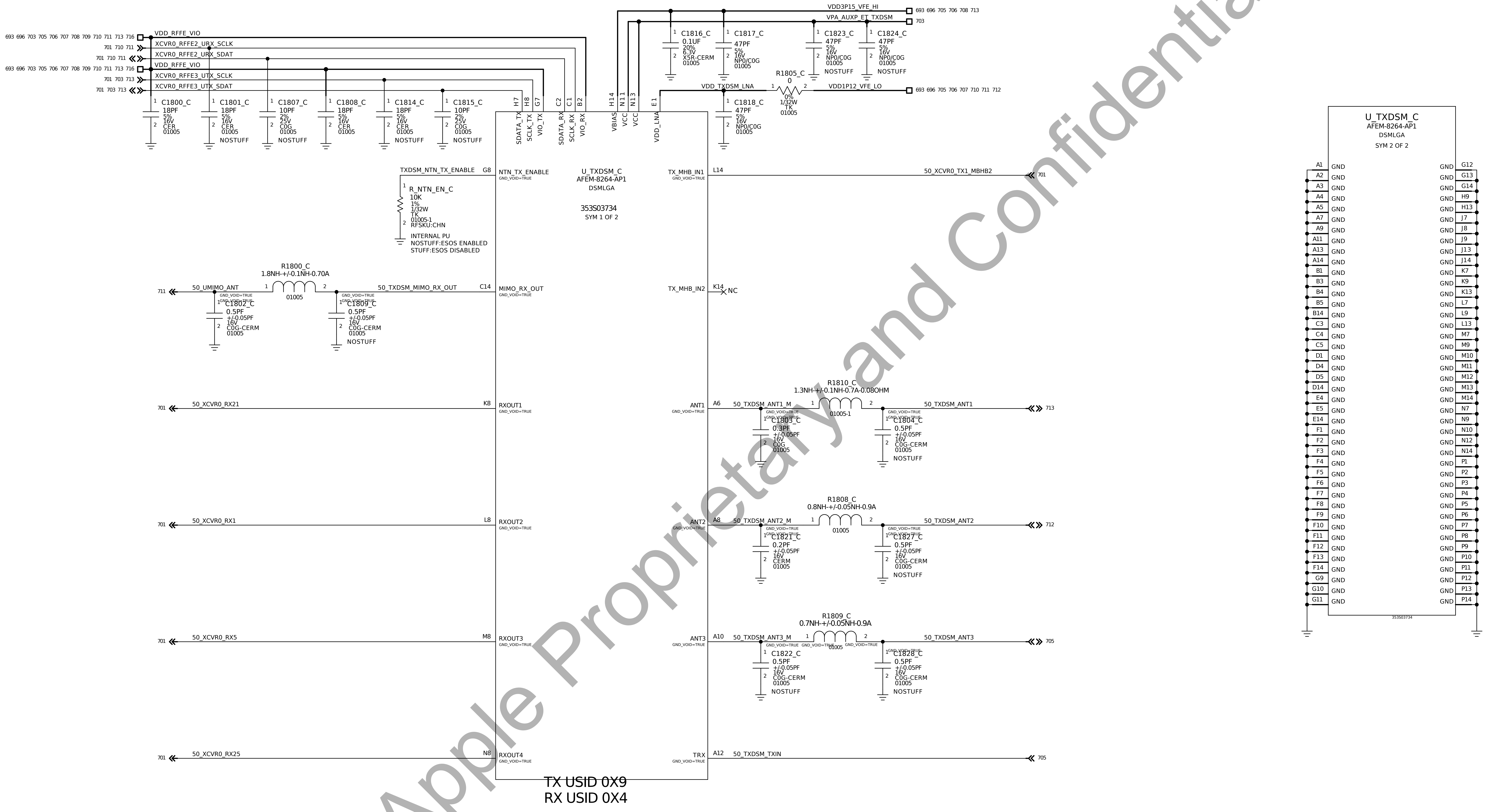
FR1 UAT TX DSM


VDD_RFFE_VIO
XCVR0_RFFE2_URX_SCLK
XCVR0_RFFE2_URX_SDAT
VDD_RFFE_VIO
XCVR0_RFFE3_UTX_SCLK
XCVR0_RFFE3_UTX_SDAT
693 696 703 705 706 707 708 709 710 711 713 716
701 710 711
701 710 711
693 696 703 705 706 707 708 709 710 711 713 716
701 703 713
701 703 713
C1800_C 18PF 5% 16V CER 01005
C1801_C 18PF 5% 16V CER 01005 NOSTUFF
C1807_C 10PF 2% 25V C0G 01005 NOSTUFF
C1808_C 18PF 5% 16V CER 01005
C1814_C 18PF 5% 16V CER 01005 NOSTUFF
C1815_C 10PF 2% 25V C0G 01005 NOSTUFF
VDD3P15_VFE_HI
693 696 705 706 708 713
VPA_AUXP_ET_TXDSM
703
C1816_C 0.1UF 20% 6.3V X5R-CERM 01005
C1817_C 47PF 5% 16V NP0/C0G 01005
C1823_C 47PF 5% 16V NP0/C0G 01005 NOSTUFF
C1824_C 47PF 5% 16V NP0/C0G 01005 NOSTUFF
R1805_C 0 0% 1/32W TK 01005
VDD_TXDSM_LNA
VDD1P12_VFE_LO
693 696 705 706 707 710 711 712
C1818_C 47PF 5% 16V NP0/C0G 01005
H7 H8 G7 C2 C1 B2 H14 N11 N13 E1
SDATA_TX SCLK_TX VIO_TX SDATA_RX SCLK_RX VIO_RX VBIAS VCC VCC VDD_LNA
U_TXDSM_C
AFEM-8264-AP1
DSMLGA
353S03734
SYM 1 OF 2
TXDSM_NTN_TX_ENABLE
G8 NTN_TX_ENABLE
R_NTN_EN_C 10K 1% 1/32W TK 01005-1 RFSKU:CHN
INTERNAL PU
NOSTUFF:ESOS ENABLED
STUFF:ESOS DISABLED
R1800_C 1.8NH-+/-0.1NH-0.70A 01005
711 50_UMIMO_ANT
50_TXDSM_MIMO_RX_OUT
C14 MIMO_RX_OUT
C1802_C 0.5PF +/-0.05PF 16V C0G-CERM 01005
C1809_C 0.5PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF
701 50_XCVR0_RX21 K8 RXOUT1
701 50_XCVR0_RX1 L8 RXOUT2
701 50_XCVR0_RX5 M8 RXOUT3
701 50_XCVR0_RX25 N8 RXOUT4
GND_VOID=TRUE
TX_MHB_IN1 L14 50_XCVR0_TX1_MBHB2 701
TX_MHB_IN2 K14 NC
ANT1 A6 50_TXDSM_ANT1_M
R1810_C 1.3NH-+/-0.1NH-0.7A-0.08OHM 01005-1
50_TXDSM_ANT1 713
C1803_C 0.3PF +/-0.05PF 16V C0G 01005
C1804_C 0.5PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF
ANT2 A8 50_TXDSM_ANT2_M
R1808_C 0.8NH-+/-0.05NH-0.9A 01005
50_TXDSM_ANT2 712
C1821_C 0.2PF +/-0.05PF 16V CERM 01005
C1827_C 0.5PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF
ANT3 A10 50_TXDSM_ANT3_M
R1809_C 0.7NH-+/-0.05NH-0.9A 01005
50_TXDSM_ANT3 705
C1822_C 0.5PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF
C1828_C 0.5PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF
TRX A12 50_TXDSM_TXIN 705
TX USID 0X9
RX USID 0X4
U_TXDSM_C
AFEM-8264-AP1
DSMLGA
SYM 2 OF 2
GND
A1 A2 A3 A4 A5 A7 A9 A11 A13 A14 B1 B3 B4 B5 B14 C3 C4 C5 D1 D4 D5 D14 E4 E5 E14 F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14 G9 G10 G11
G12 G13 G14 H9 H13 J7 J8 J9 J13 J14 K7 K9 K13 L7 L9 L13 M7 M9 M10 M11 M12 M13 M14 N7 N9 N10 N12 N14 P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14
353S03734

PAGE TITLE

FR1 UAT TX DSM (18)

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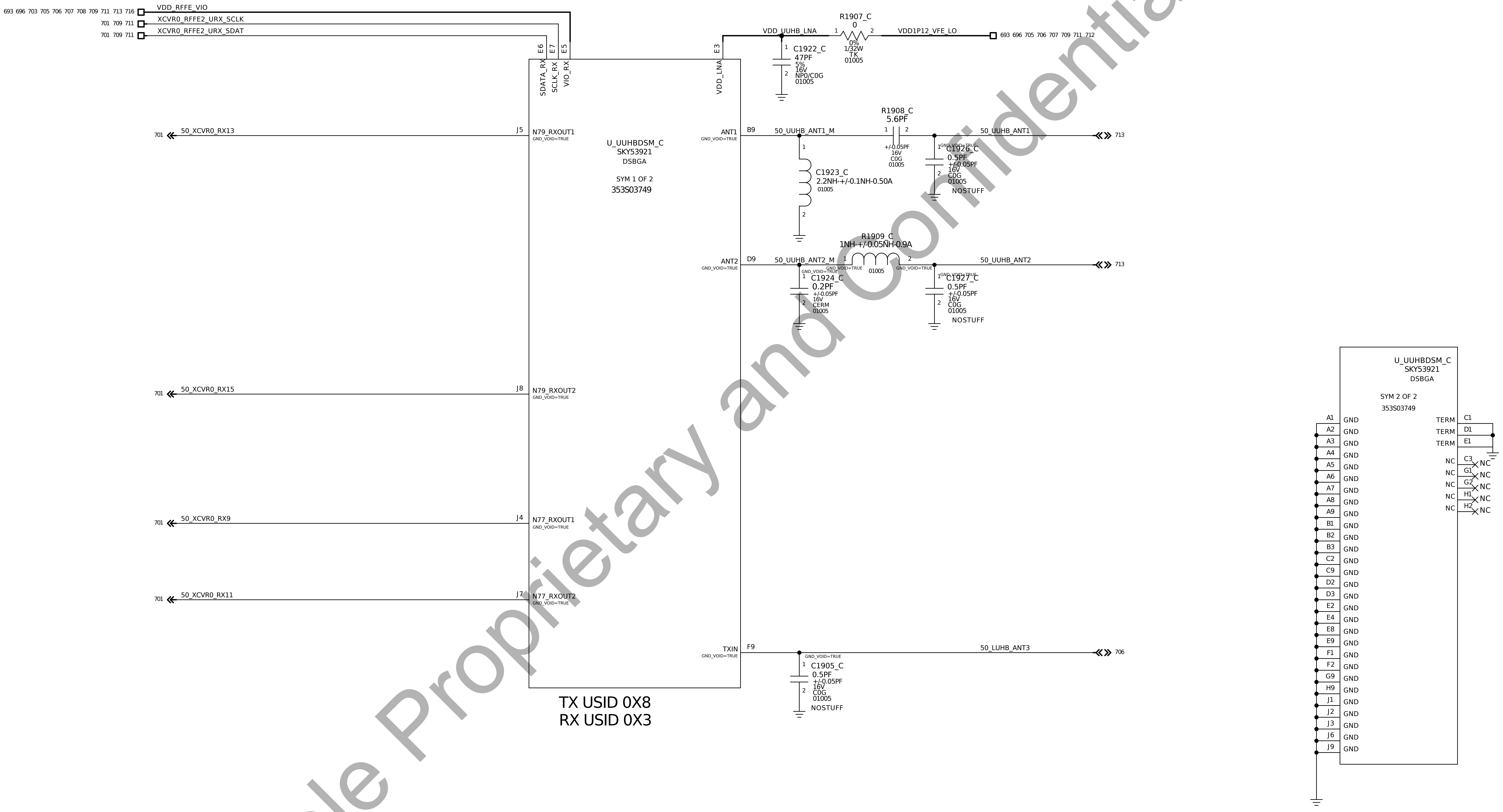
FR1 UAT UHB DSM



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VDD_RFFE_VIO
701 709 711
XCVR0_RFFE2_URX_SCLK
701 709 711
XCVR0_RFFE2_URX_SDAT
E6
E7
E5
SDATA_RX
SCLK_RX
VIO_RX
E3
VDD_LNA
VDD_UUHB_LNA
C1922_C
47PF
5%
16V
NP0/C0G
01005
R1907_C
0
0%
1/32W
TK
01005
VDD1P12_VFE_LO
693 696 705 706 707 709 711 712
U_UUHBDSM_C
SKY53921
DSBGA
SYM 1 OF 2
353S03749
701
50_XCVR0_RX13
J5
N79_RXOUT1
GND_VOID=TRUE
ANT1
GND_VOID=TRUE
B9
50_UUHB_ANT1_M
R1908_C
5.6PF
+/-0.05PF
16V
C0G
01005
50_UUHB_ANT1
713
C1923_C
2.2NH-+/-0.1NH-0.50A
01005
C1926_C
0.5PF
+/-0.05PF
16V
C0G
01005
NOSTUFF
ANT2
GND_VOID=TRUE
D9
50_UUHB_ANT2_M
R1909_C
1NH-+/-0.05NH-0.9A
01005
50_UUHB_ANT2
713
C1924_C
0.2PF
+/-0.05PF
16V
CERM
01005
C1927_C
0.5PF
+/-0.05PF
16V
C0G
01005
NOSTUFF
701
50_XCVR0_RX15
J8
N79_RXOUT2
GND_VOID=TRUE
701
50_XCVR0_RX9
J4
N77_RXOUT1
GND_VOID=TRUE
701
50_XCVR0_RX11
J7
N77_RXOUT2
GND_VOID=TRUE
TXIN
GND_VOID=TRUE
F9
50_LUHB_ANT3
706
C1905_C
0.5PF
+/-0.05PF
16V
C0G
01005
NOSTUFF
TX USID 0X8
RX USID 0X3
U_UUHBDSM_C
SKY53921
DSBGA
SYM 2 OF 2
353S03749
A1 GND
A2 GND
A3 GND
A4 GND
A5 GND
A6 GND
A7 GND
A8 GND
A9 GND
B1 GND
B2 GND
B3 GND
C2 GND
C9 GND
D2 GND
D3 GND
E2 GND
E4 GND
E8 GND
E9 GND
F1 GND
F2 GND
G9 GND
H9 GND
J1 GND
J2 GND
J3 GND
J6 GND
J9 GND
TERM C1
TERM D1
TERM E1
NC C3 NC
NC G1 NC
NC G2 NC
NC H1 NC
NC H2 NC

PAGE TITLE

FR1 UAT UHB DSM (19)

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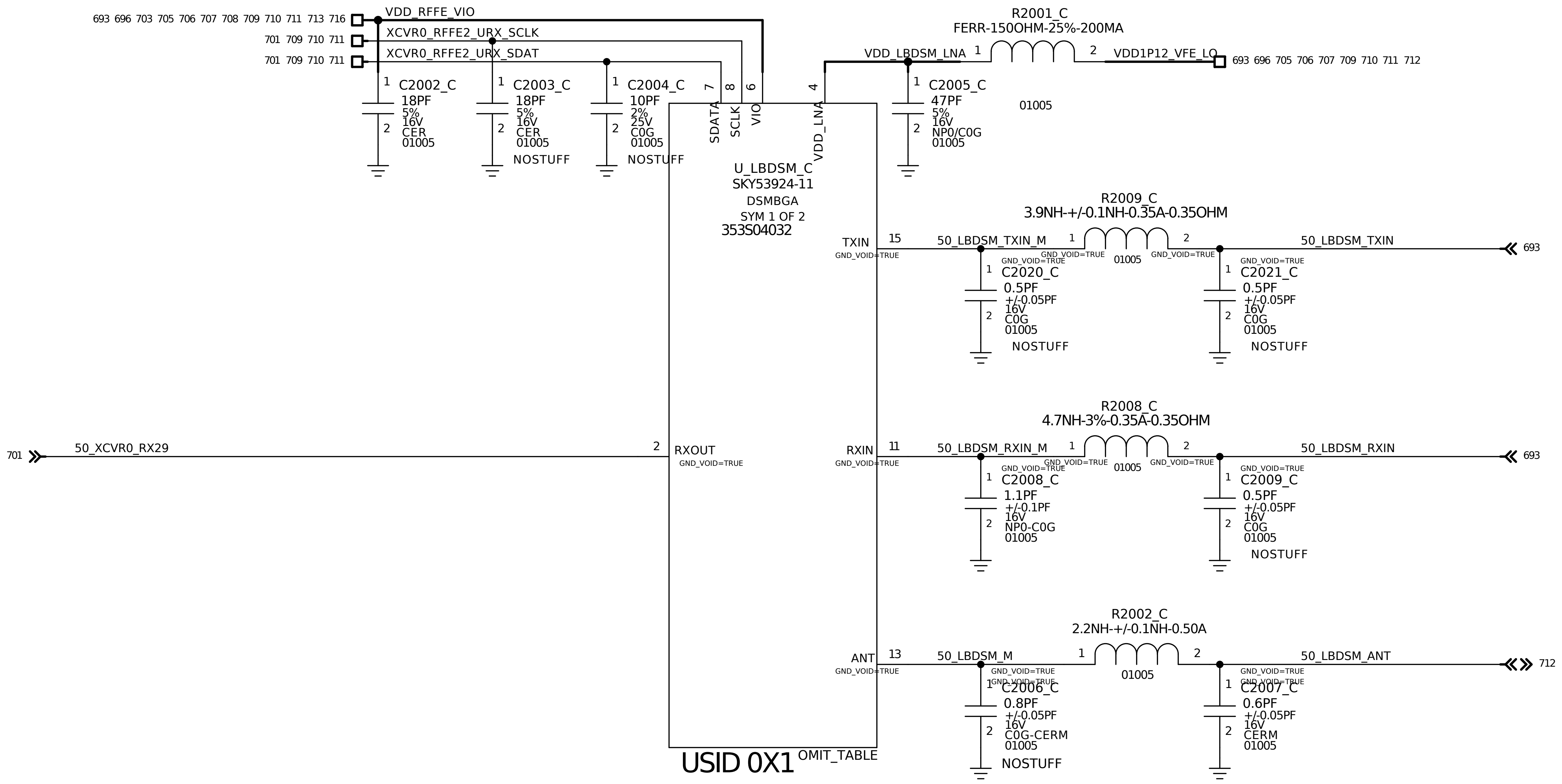
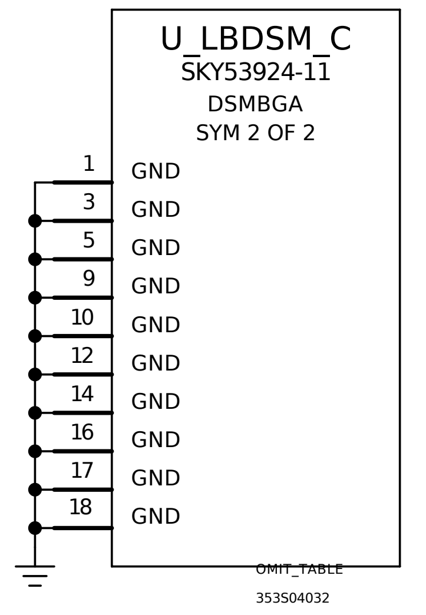
FR1 UAT RX (1/2)

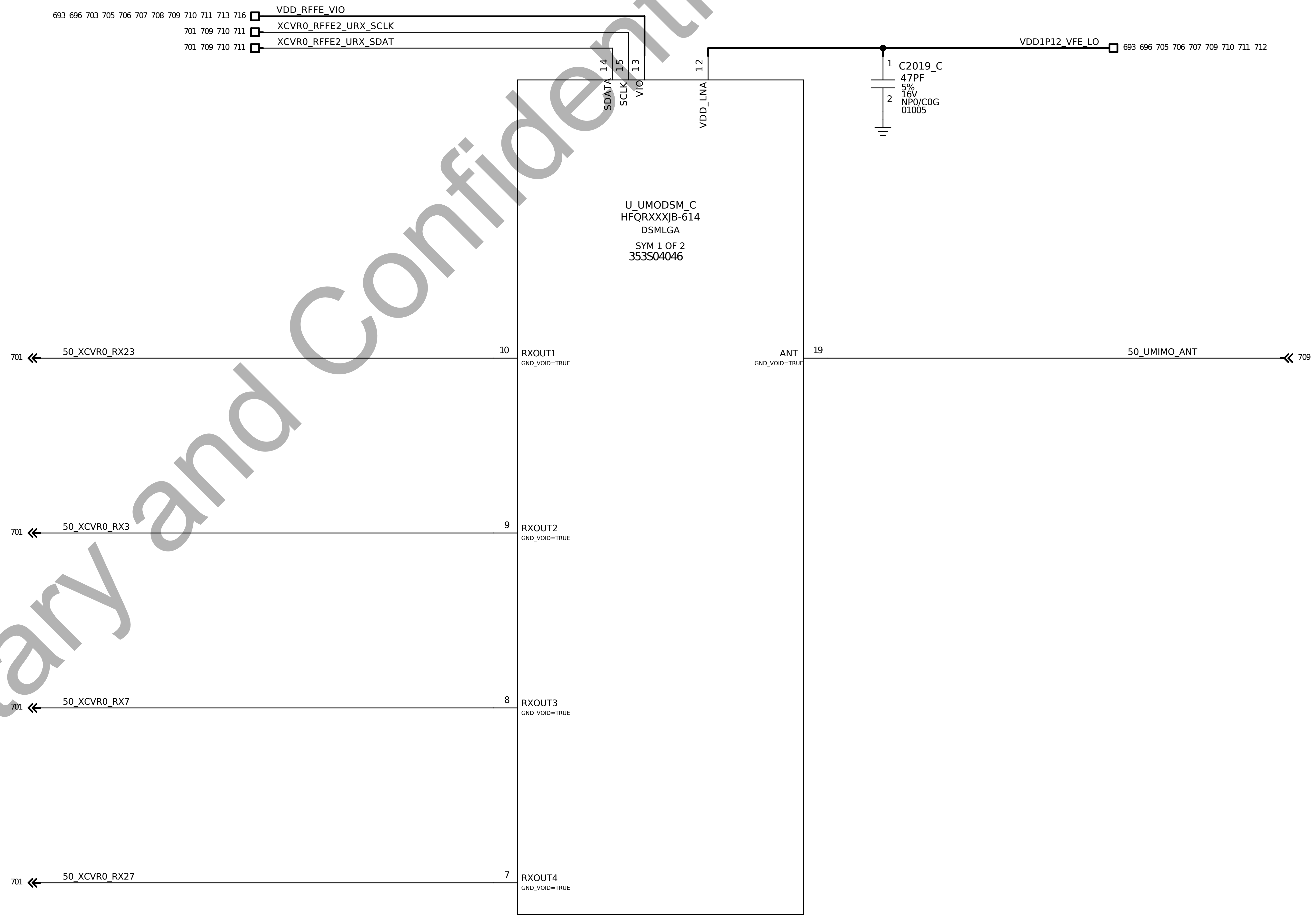

693 696 703 705 706 707 708 709 710 711 713 716
VDD_RFFE_VIO
701 709 710 711
XCVR0_RFFE2_URX_SCLK
701 709 710 711
XCVR0_RFFE2_URX_SDAT
C2002_C
18PF
5%
16V
CER
01005
C2003_C
18PF
5%
16V
CER
01005
NOSTUFF
C2004_C
10PF
2%
25V
C0G
01005
NOSTUFF
SDATA
SCLK
VIO
VDD_LNA
VDD_LBDSM_LNA
R2001_C
FERR-150OHM-25%-200MA
01005
VDD1P12_VFE_LO
693 696 705 706 707 709 710 711 712
C2005_C
47PF
5%
16V
NP0/C0G
01005
U_LBDSM_C
SKY53924-11
DSMBGA
SYM 1 OF 2
353S04032
TXIN
15
50_LBDSM_TXIN_M
R2009_C
3.9NH-+/-0.1NH-0.35A-0.35OHM
01005
50_LBDSM_TXIN
693
C2020_C
0.5PF
+/-0.05PF
16V
C0G
01005
NOSTUFF
C2021_C
0.5PF
+/-0.05PF
16V
C0G
01005
NOSTUFF
701
50_XCVR0_RX29
RXOUT
RXIN
11
50_LBDSM_RXIN_M
R2008_C
4.7NH-3%-0.35A-0.35OHM
01005
50_LBDSM_RXIN
693
C2008_C
1.1PF
+/-0.1PF
16V
NP0-C0G
01005
C2009_C
0.5PF
+/-0.05PF
16V
C0G
01005
NOSTUFF
ANT
13
50_LBDSM_M
R2002_C
2.2NH-+/-0.1NH-0.50A
01005
50_LBDSM_ANT
712
C2006_C
0.8PF
+/-0.05PF
16V
C0G-CERM
01005
NOSTUFF
C2007_C
0.6PF
+/-0.05PF
16V
CERM
01005
GND_VOID=TRUE
USID 0X1
OMIT_TABLE

LB DSM


U_LBDSM_C
SKY53924-11
DSMBGA
SYM 2 OF 2
1 3 5 9 10 12 14 16 17 18
GND
OMIT_TABLE
353S04032

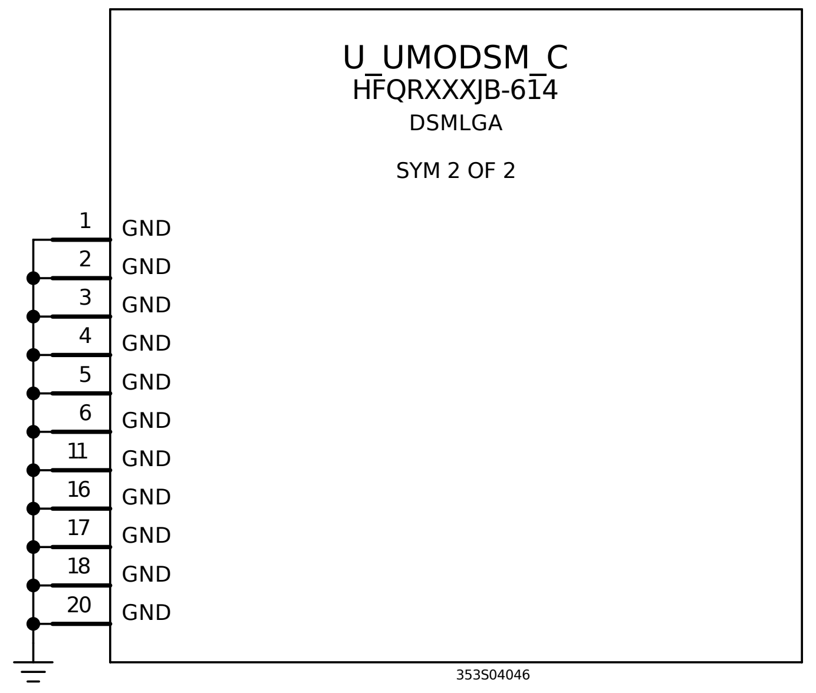
LB DSM RF SKU

	PART NUMBER	BOMOPTION	REFERENCE DESIGNATORS	CRITICAL	QTY	DESCRIPTION
WW SKU	353S04032	RFSKU:US	U_LBDSM_C	CRITICAL	1	IC,DSM,LB,SKY53924,DSMBGA18
WW SKU	353S04032	RFSKU:RS	U_LBDSM_C	CRITICAL	1	IC,DSM,LB,SKY53924,DSMBGA18
RS SKU	353S04052	RFSKU:ROW	U_LBDSM_C	CRITICAL	1	IC,RS,DSM,LB,SKY53925,DSMBGA18
RS SKU	353S04052	RFSKU:CHN	U_LBDSM_C	CRITICAL	1	IC,RS,DSM,LB,SKY53925,DSMBGA18


693 696 703 705 706 707 708 709 710 711 713 716
VDD_RFFE_VIO
701 709 710 711
XCVR0_RFFE2_URX_SCLK
701 709 710 711
XCVR0_RFFE2_URX_SDAT
SDATA
SCLK
VIO
VDD_LNA
VDD1P12_VFE_LO
693 696 705 706 707 709 710 711 712
C2019_C
47PF
5%
16V
NP0/C0G
01005
U_UMODSM_C
HFQRXXXJB-614
DSMLGA
SYM 1 OF 2
353S04046
701
50_XCVR0_RX23
RXOUT1
ANT
19
50_UMIMO_ANT
709
701
50_XCVR0_RX3
RXOUT2
701
50_XCVR0_RX7
RXOUT3
701
50_XCVR0_RX27
RXOUT4
GND_VOID=TRUE

USID 0X5

MIMO DSM


U_UMODSM_C
HFQRXXXJB-614
DSMLGA
SYM 2 OF 2
1 2 3 4 5 6 11 16 17 18 20
GND
353S04046

PAGE TITLE

FR1 UAT RX (1/2) (20)

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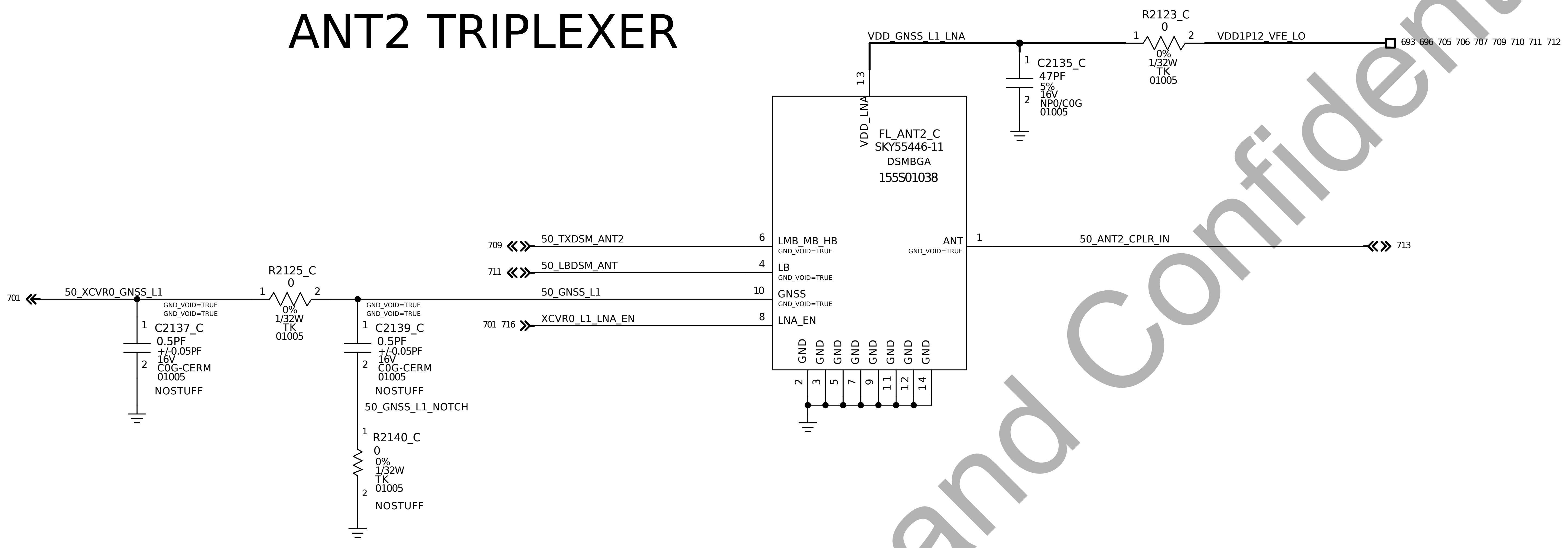
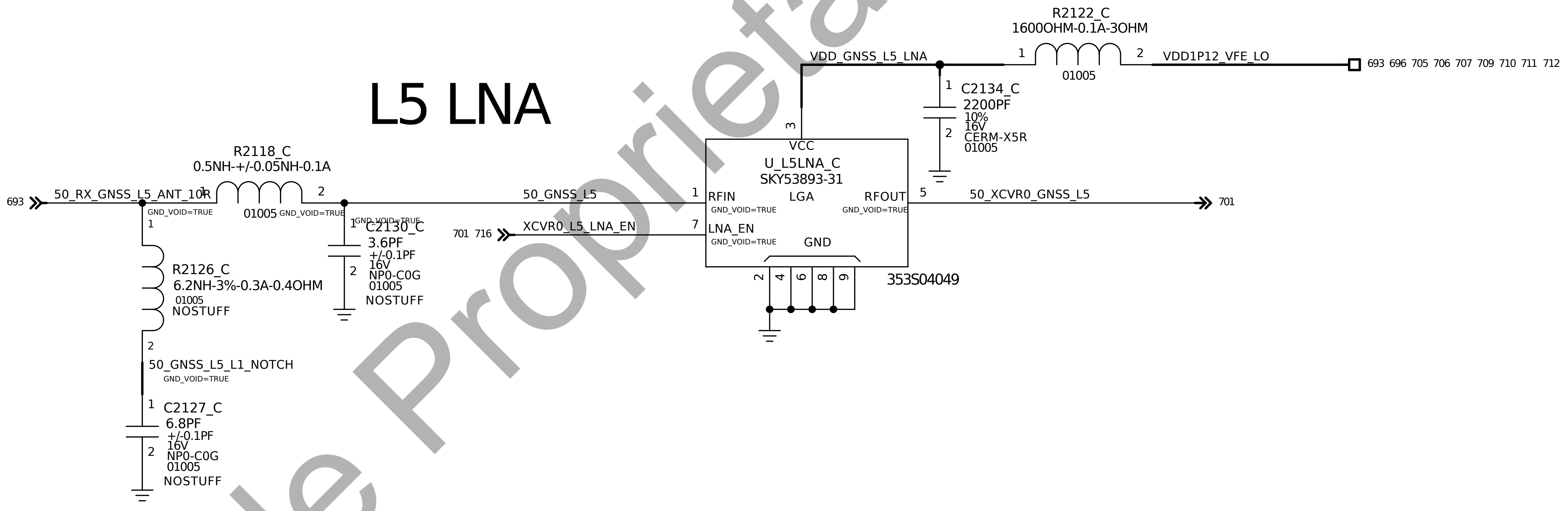
FR1 UAT RX (2/2)

ANT2 TRIPLEXER


VDD_GNSS_L1_LNA
R2123_C
0
1
2
0%
1/32W
TK
01005
VDD1P12_VFE_LO
693 696 705 706 707 709 710 711 712
C2135_C
47PF
5%
16V
NP0/C0G
01005
13
VDD_LNA
FL_ANT2_C
SKY55446-11
DSMBGA
155S01038
709
50_TXDSM_ANT2
6
LMB_MB_HB
GND_VOID=TRUE
711
50_LBDSM_ANT
4
LB
GND_VOID=TRUE
701
50_XCVR0_GNSS_L1
GND_VOID=TRUE
GND_VOID=TRUE
R2125_C
0
1
2
0%
1/32W
TK
01005
GND_VOID=TRUE
GND_VOID=TRUE
50_GNSS_L1
10
GNSS
GND_VOID=TRUE
701 716
XCVR0_L1_LNA_EN
8
LNA_EN
ANT
GND_VOID=TRUE
1
50_ANT2_CPLR_IN
713
GND GND GND GND GND GND GND GND
2 3 5 7 9 11 12 14
C2137_C
0.5PF
+/-0.05PF
16V
C0G-CERM
01005
NOSTUFF
C2139_C
0.5PF
+/-0.05PF
16V
C0G-CERM
01005
NOSTUFF
50_GNSS_L1_NOTCH
R2140_C
0
0%
1/32W
TK
01005
NOSTUFF

L5 LNA


R2122_C
1600OHM-0.1A-3OHM
VDD_GNSS_L5_LNA
1
2
01005
VDD1P12_VFE_LO
693 696 705 706 707 709 710 711 712
C2134_C
2200PF
10%
16V
CERM-X5R
01005
3
VCC
U_L5LNA_C
SKY53893-31
LGA
R2118_C
0.5NH-+/-0.05NH-0.1A
01005
693
50_RX_GNSS_L5_ANT_10R
GND_VOID=TRUE
GND_VOID=TRUE
50_GNSS_L5
1
RFIN
GND_VOID=TRUE
RFOUT
GND_VOID=TRUE
5
50_XCVR0_GNSS_L5
701
C2130_C
GND_VOID=TRUE
3.6PF
+/-0.1PF
16V
NP0-C0G
01005
NOSTUFF
701 716
XCVR0_L5_LNA_EN
7
LNA_EN
GND_VOID=TRUE
GND
2 4 6 8 9
353S04049
R2126_C
6.2NH-3%-0.3A-0.4OHM
01005
NOSTUFF
50_GNSS_L5_L1_NOTCH
GND_VOID=TRUE
C2127_C
6.8PF
+/-0.1PF
16V
NP0-C0G
01005
NOSTUFF

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FR1 UAT RX (2/2) (21)

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FR1 UAT COUPLERS

VDD_RFFE_VIO
XCVR0_RFFE3_UTX_SCLK
XCVR0_RFFE3_UTX_SDAT
693 696 703 705 706 707 708 709 710 711 713 716
701 703 709 713
C2201_C 18PF 5% 16V CER 01005
C2203_C 18PF 5% 16V CER 01005 NOSTUFF
C2204_C 10PF 2% 25V C0G 01005 NOSTUFF
VDD3P15_VFE_HI
693 696 705 706 708 709 713
C2205_C 47PF 5% 16V NP0/C0G 01005
SDATA SCLK VIO VBIAS USID
U_UCPLR1_C
SKY59729
LGA
SYM 1 OF 2
155S00928
CPL1_ANT
50_ANT4_MBHB_M
R2202_C
0.9NH-+/-0.05NH-0.9A
01005
50_ANT4_MBHB
714
C2207_C 0.5PF +/-0.05PF 16V C0G 01005 NOSTUFF
C2209_C 0.5PF +/-0.05PF 16V C0G 01005 NOSTUFF
GND_VOID=TRUE
709
50_TXDSM_ANT1
CPL1_IN
CPL2_ANT
50_TRX_ANT2_LB_LMB_MB_HB_L1
693
712
50_ANT2_CPLR_IN
R2200_C
0.8NH-+/-0.05NH-0.9A
01005
50_ANT2_CPLR_IN_M
C2200_C 0.4PF +/-0.05PF 16V C0G 01005 NOSTUFF
C2202_C 0.5PF +/-0.05PF 16V C0G 01005 NOSTUFF
CPL2_IN
NC
EXT_IN1
EXT_IN2
CPL_OUT1
CPL_OUT2
CPL_OUT3
50_UCPLR1_OUT1
50_UCPLR1_OUT2
NC
USID 0X5
U_UCPLR2_C
SKY59729
LGA
SYM 1 OF 2
155S00928
50_ANT4_UHB
714
710
50_UUHB_ANT1
50_TRX_ANT8_UHB_N79
693
710
50_UUHB_ANT2
50_UCPLR1_OUT2
50_UCPLR1_OUT1
50_XCVR0_FBR2_2
50_XCVR0_FBR1_2
701
NC
USID 0X4
DUAL COUPLER
U_UCPLR1_C
SKY59729
LGA
SYM 2 OF 2
155S00928
GND
3 8 9 10 14 17 18 19 20 22 23
DUAL COUPLER
U_UCPLR2_C
SKY59729
LGA
SYM 2 OF 2
155S00928
GND
3 8 9 10 14 17 18 19 20 22 23

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FR1 UAT COUPLERS (22)

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FR1 UAT ANTENNAS & GPS

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
50_ANT4_MBHB	P	A_50_WIDE_L3-THIN_SE	50_ANT4_MBHB, 50_ANT4_M	?
50_ANT4_UAT2	P	A_50_WIDE_L3-HWIDE_SE	50_TRX_ANT4_MB_HB_WLAN24	?
50_ANT2_CPLR	P	A_50_THIN_SE	50_ANT2_CPLR_IN, 50_ANT2_CPLR_IN_M	?
50_ANT10_GNSS_L5	P	A_50_WIDE_L3-HWIDE_SE	50_RX_GNSS_L5_ANT_10L, 50_GNSS_L5	?
50_WIDE_SURFACE_THIN_SE	P	A_50_WIDE_SURFACE_THIN_SE	50_TXDSM_TXIN, 50_LUHB_ANT3, 50_TXDSM_ANT3	?

<HIER SCHEMATIC> | <TOP SCHEMATIC>

50_ANT4 = 50_TRX_ANT4_MB_HB_WLAN24

50_ANT10 = 50_RX_GNSS_L5_ANT_10L

SPACING (SCSET)

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
50_ANT4_MBHB	S	A_DIELECTRIC_2X_50_WIDE_SE	=	?
50_ANT4_UAT2	S	A_DIELECTRIC_2X_50_WIDE_SE	=	?
50_ANT2_CPLR	S	A_DIELECTRIC_2X_50_WIDE_SE	=	?
50_ANT10_GNSS_L5	S	A_DIELECTRIC_2X_50_WIDE_SE	=	?
50_WIDE_SURFACE_THIN_SE	S	A_DIELECTRIC_2X_50_WIDE_SURFACE_THIN_SE	=	?

SPACING MATRIX

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
50_ANT4_MBHB	50_WIDE_SE	A_DIELECTRIC_3.2XV_50_WIDE_SE
50_ANT4_MBHB	50_THIN_SE	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	50_LMB_HB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	50_UHB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	50_2G_LB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	50_HB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	50_UHB_SPAD_LAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	50_TXDSM_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	50_UHB_SPAD_UAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	GND	A_DIELECTRIC_1.6X_50_WIDE_SE

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
50_ANT4_MBHB	50_ANT4_MBHB	A_DIELECTRIC_3.2XV_50_WIDE_SE
50_ANT4_MBHB	50_ANT4_UAT2	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	50_ANT2_CPLR	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_MBHB	50_ANT10_GNSS_L5	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_ANT4_UAT2	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_ANT2_CPLR	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_ANT10_GNSS_L5	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	50_ANT2_CPLR	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	50_ANT10_GNSS_L5	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT10_GNSS_L5	50_ANT10_GNSS_L5	A_DIELECTRIC_4XD_50_WIDE_SE

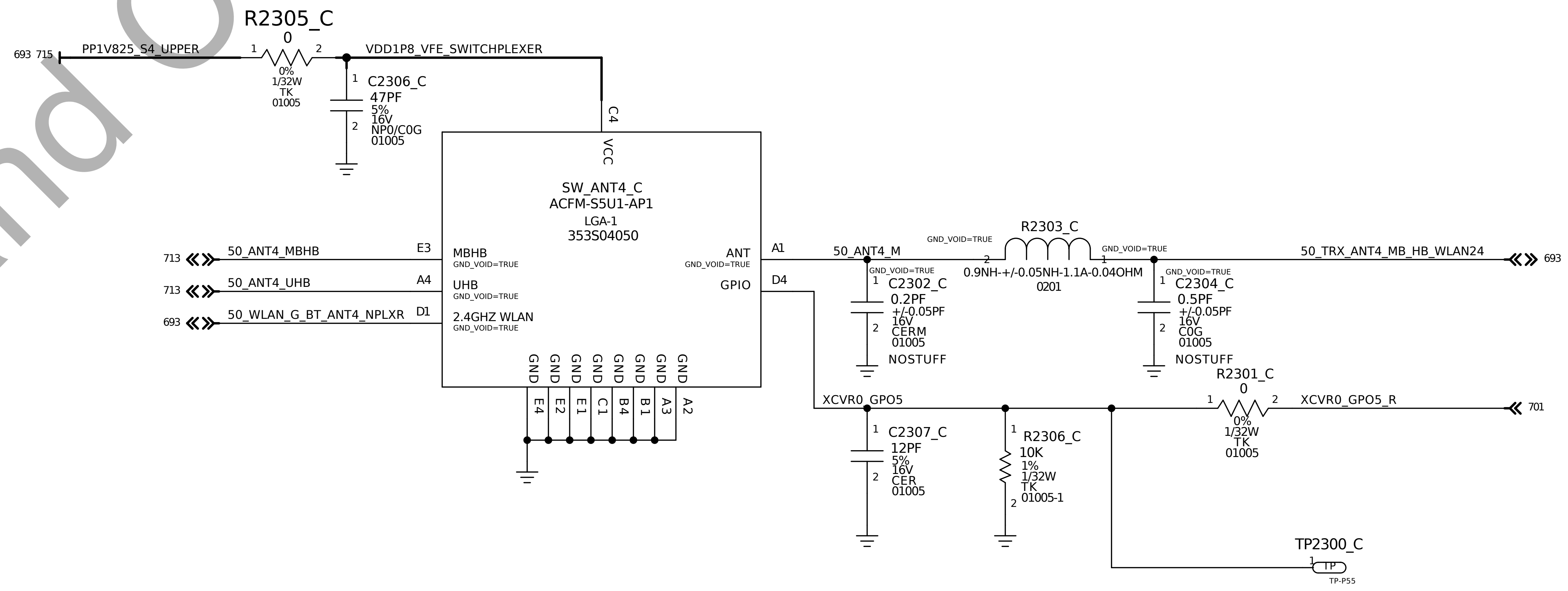
CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
50_WIDE_SURFACE_THIN_SE	GND	A_DIELECTRIC_1.6X_50_WIDE_SURFACE_THIN_SE

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
50_ANT4_UAT2	50_WIDE_SE	A_DIELECTRIC_3.2XV_50_WIDE_SE
50_ANT4_UAT2	50_THIN_SE	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_LMB_HB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_UHB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_2G_LB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_HB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_UHB_SPAD_LAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_TXDSM_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	50_UHB_SPAD_UAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT4_UAT2	GND	A_DIELECTRIC_1.6X_50_WIDE_SE

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
50_ANT2_CPLR	50_WIDE_SE	A_DIELECTRIC_3.2XV_50_WIDE_SE
50_ANT2_CPLR	50_THIN_SE	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	50_LMB_HB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	50_UHB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	50_2G_LB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	50_HB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	50_UHB_SPAD_LAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	50_TXDSM_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	50_UHB_SPAD_UAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT2_CPLR	GND	A_DIELECTRIC_1.6X_50_WIDE_SE

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
50_ANT10_GNSS_L5	50_WIDE_SE	A_DIELECTRIC_3.2XV_50_WIDE_SE
50_ANT10_GNSS_L5	50_THIN_SE	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT10_GNSS_L5	50_LMB_HB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT10_GNSS_L5	50_UHB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT10_GNSS_L5	50_2G_LB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT10_GNSS_L5	50_HB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT10_GNSS_L5	50_UHB_SPAD_LAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT10_GNSS_L5	50_TXDSM_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT10_GNSS_L5	50_UHB_SPAD_UAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_ANT10_GNSS_L5	GND	A_DIELECTRIC_1.6X_50_WIDE_SE

ANT4 SWITCHPLEXER


R2305_C
0
693 715
PP1V825_S4_UPPER
1
2
0%
1/32W
TK
01005
VDD1P8_VFE_SWITCHPLEXER
C2306_C
47PF
5%
16V
NP0/C0G
01005
C4
VCC
SW_ANT4_C
ACFM-S5U1-AP1
LGA-1
353S04050
713
50_ANT4_MBHB
E3
MBHB
GND_VOID=TRUE
713
50_ANT4_UHB
A4
UHB
GND_VOID=TRUE
693
50_WLAN_G_BT_ANT4_NPLXR
D1
2.4GHZ WLAN
GND_VOID=TRUE
ANT
GND_VOID=TRUE
GPIO
A1
D4
GND
E4
E2
E1
C1
B4
B1
A3
A2
50_ANT4_M
GND_VOID=TRUE
C2302_C
0.2PF
+/-0.05PF
16V
CERM
01005
NOSTUFF
R2303_C
0.9NH-+/-0.05NH-1.1A-0.04OHM
0201
C2304_C
0.5PF
+/-0.05PF
16V
C0G
01005
NOSTUFF
50_TRX_ANT4_MB_HB_WLAN24
693
XCVR0_GPO5
C2307_C
12PF
5%
16V
CER
01005
R2306_C
10K
1%
1/32W
TK
01005-1
R2301_C
0
0%
1/32W
TK
01005
XCVR0_GPO5_R
701
TP2300_C
TP
TP-P55

PLACE ON BOTTOM SIDE

VCC=1.8, VIH=0.95V

PAGE TITLE

FR1 UAT ANTENNAS & GPS (23)

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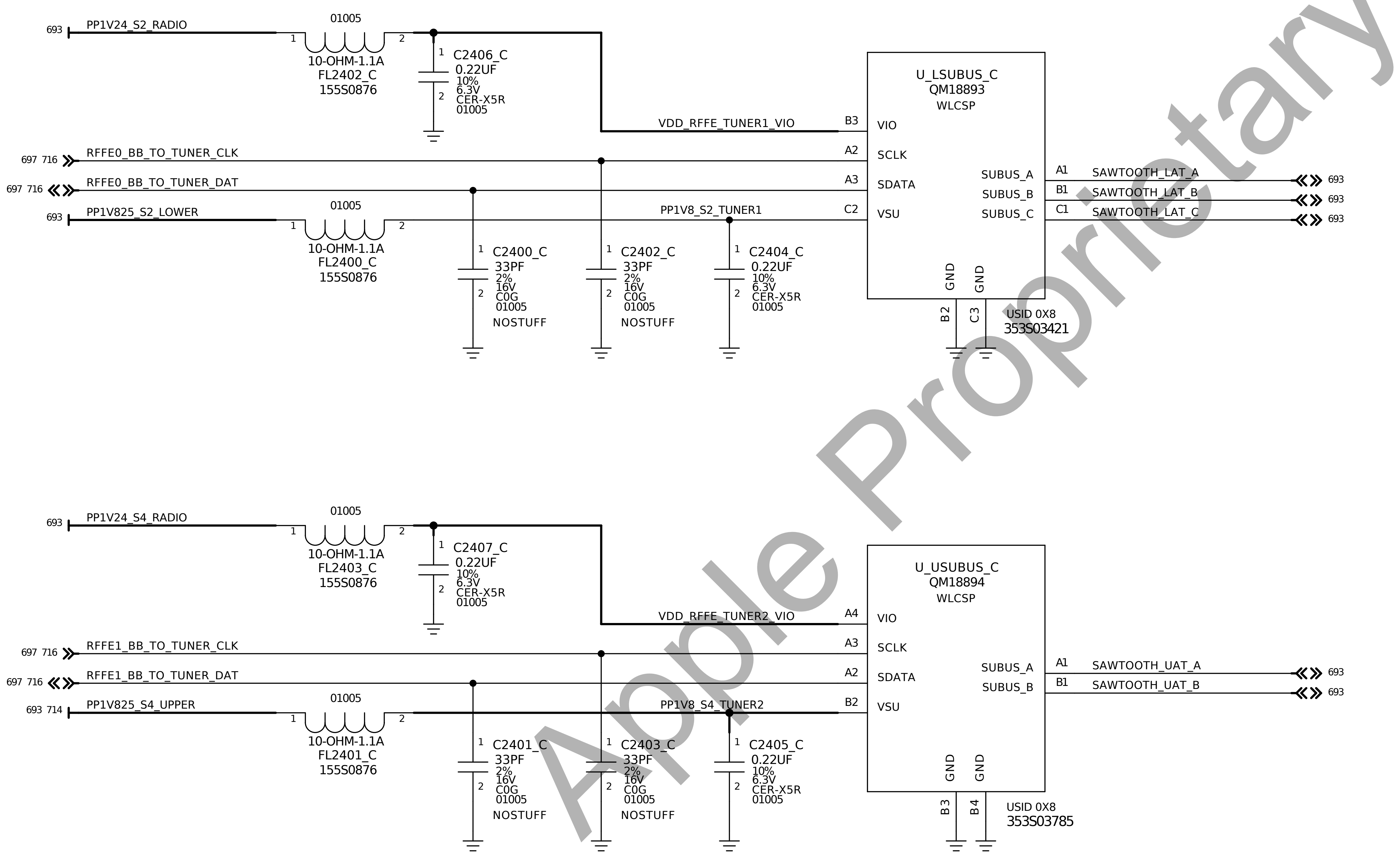
FR1 ANTENNA TUNERS

SUBUS BRIDGE


693
PP1V24_S2_RADIO
01005
1
2
10-OHM-1.1A
FL2402_C
155S0876
C2406_C
0.22UF
10%
6.3V
CER-X5R
01005
VDD_RFFE_TUNER1_VIO
B3
VIO
U_LSUBUS_C
QM18893
WLCSP
697 716
RFFE0_BB_TO_TUNER_CLK
A2
SCLK
697 716
RFFE0_BB_TO_TUNER_DAT
A3
SDATA
693
PP1V825_S2_LOWER
01005
10-OHM-1.1A
FL2400_C
155S0876
PP1V8_S2_TUNER1
C2
VSU
C2400_C
33PF
2%
16V
C0G
01005
NOSTUFF
C2402_C
33PF
2%
16V
C0G
01005
NOSTUFF
C2404_C
0.22UF
10%
6.3V
CER-X5R
01005
SUBUS_A
A1
SAWTOOTH_LAT_A
693
SUBUS_B
B1
SAWTOOTH_LAT_B
693
SUBUS_C
C1
SAWTOOTH_LAT_C
693
GND
GND
B2
C3
USID 0X8
353S03421
693
PP1V24_S4_RADIO
01005
10-OHM-1.1A
FL2403_C
155S0876
C2407_C
0.22UF
10%
6.3V
CER-X5R
01005
VDD_RFFE_TUNER2_VIO
A4
VIO
U_USUBUS_C
QM18894
WLCSP
697 716
RFFE1_BB_TO_TUNER_CLK
A3
SCLK
697 716
RFFE1_BB_TO_TUNER_DAT
A2
SDATA
693 714
PP1V825_S4_UPPER
01005
10-OHM-1.1A
FL2401_C
155S0876
PP1V8_S4_TUNER2
B2
VSU
C2401_C
33PF
2%
16V
C0G
01005
NOSTUFF
C2403_C
33PF
2%
16V
C0G
01005
NOSTUFF
C2405_C
0.22UF
10%
6.3V
CER-X5R
01005
SUBUS_A
A1
SAWTOOTH_UAT_A
693
SUBUS_B
B1
SAWTOOTH_UAT_B
693
GND
GND
B3
B4
USID 0X8
353S03785

UAT TUNERS KEPT POWERED UP IN LPEM (S4)

PAGE TITLE

FR1 ANTENNA TUNERS (24)

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PP2501_C 1 90_PCIE_GP1_AP_TO_BB_REFCLK_P 693 697
PP2502_C 1 90_PCIE_GP1_AP_TO_BB_REFCLK_N 693 697
PP2503_C 1 90_PCIE_GP1_AP_TO_BB_TX_P 693 697
PP2504_C 1 90_PCIE_GP1_AP_TO_BB_TX_N 693 697
PP2505_C 1 90_PCIE_GP1_AP_FROM_BB_RX_P 693 697
PP2506_C 1 90_PCIE_GP1_AP_FROM_BB_RX_N 693 697
BB_TO_AP PCIE PROBE POINTS PLACED CLOSER TO LEDA DUE TO ROUTING
PP2507_C 1 PCIE_GP1_AP_TO_BB_PERST_L 693 697
PP2508_C 1 PCIE_GP1_AP_BI_BB_CLKREQ_L 693 697
PP2509_C 1 GPIO_PMU_FROM_BB_PCIE_HOST_WAKE_L 693 697
PP2511_C 1 BB_TO_DDR_SLEEP_RESET_L 697
PP2512_C 1 GPIO_NUB_FROM_BB_WDOG_L 693 697
PP2515_C 1 IO_BB_FROM_SIM1_DETECT 693 697 698
PP2516_C 1 SIM0_RST 697 698
PP2517_C 1 SIM1_RST 697 698
PP2518_C 1 SIM0_CLK 697 698
PP2519_C 1 SIM1_CLK 697 698
PP2520_C 1 SIM0_DAT 697 698
PP2521_C 1 SIM1_DAT 697 698
PP2524_C 1 UART_MEMS_TD 697 700 701
PP2523_C 1 TP_GPIO0 697
PP2525_C 1 TP_COEX_GPIO0 697
PP2526_C 1 TP_ANALOGMUX_OUT 697
PP2527_C 1 TP_DBGWRAP_TEST_PORT 697
PP2528_C 1 GPIO_BB_TO_NUB_GSM_TXBURST_IND 693 697
PP2500_C 1 TP_TST_CLKOUT 697
PP2530_C 1 RFFE0_BB_TO_TUNER_CLK 697 715
PP2531_C 1 RFFE0_BB_TO_TUNER_DAT 697 715
PP2532_C 1 RFFE1_BB_TO_TUNER_CLK 697 715
PP2533_C 1 RFFE1_BB_TO_TUNER_DAT 697 715
PP2549_C 1 DWB_SCLK 697 701
PP2550_C 1 DWB_SDAT 697 701
PP2551_C 1 XCVR0_DWB_IRQ 697 701
GNSS
PP2561_C 1 XCVR0_L1_LNA_EN 701 712
PP2562_C 1 XCVR0_L5_LNA_EN 701 712
PP2563_C 1 BB_TO_GNSS_TIMEMARK 697 701
RESET
PP2564_C 1 XCVR0_RESET_L 697 701
CLOCKS
PP2538_C 1 BBPMU_TO_MEMS_CLKEN 695 700
PP2539_C 1 XCVR0_CLK_REQ 695 700 701
PP2540_C 1 CLK_MEMS_TO_BBPMU_38M4 695 700
PP2541_C 1 50_CLK_MEMS_TO_BB_38M4 697 700
PP2542_C 1 50_CLK_MEMS_TO_XCVR0_76M8 700 701
PP2544_C 1 CLK32K_BB_XCVR0 695 697 701
MPHY
PP2545_C 1 85_MPHY_XCVR0_TO_BB_RX0_P 697 701
PP2546_C 1 85_MPHY_XCVR0_TO_BB_RX0_N 697 701
PP2547_C 1 85_MPHY_BB_TO_XCVR0_TX0_P 697 701
PP2548_C 1 85_MPHY_BB_TO_XCVR0_TX0_N 697 701
PP2565_C 1 SPI1_AOP_TO_GNSS_SCLK 693 701
PP2566_C 1 SPI1_AOP_FROM_GNSS_MISO 693 701
PP2567_C 1 SPI1_AOP_TO_GNSS_MOSI 693 701
PP2568_C 1 GPIO_SCM_AOP_TO_GNSS_SPI_CS_L 693 701
PP2570_C 1 GPIO_AOP_FROM_GNSS_HOST_REQ 693 701
PP2571_C 1 GPIO_SEQ_PMU_TO_BBPMU_RESET_L 693 695 697 716
PP2572_C 1 BB_TO_BBPMU_SOCHOT_L 695 697
PP2574_C 1 BBPMU_TO_BB_RESET_L 695 697
PP2575_C 1 TP_BBPMU_GPIO0 695
PP2577_C 1 GPIO_NFC_P_TO_BBPMU_CLK_EN 693 695
PP2560_C 1 VDD_RFFE_VIO 693 696 703 705 706 707 708 709 710 711 713
PP2579_C 1 100_XCVR0_ET1_1P 701 703
PP2580_C 1 100_XCVR0_ET1_1N 701 703
PP2581_C 1 100_XCVR0_ET2_1P 701 703
PP2582_C 1 100_XCVR0_ET2_1N 701 703
PP2583_C 1 100_XCVR0_ET1_2P 701 703
PP2584_C 1 100_XCVR0_ET1_2N 701 703
PP
DEBUG CONNECTOR
MLB :516S00905 <-- THIS
FLEX :516S00904
NOSTUFF
J_DEBUG_C
BM55P0.5-14DP/2-0.3V(51)
M-ST-SM
15 16
90_EUSB_CARRIER_P 1 2 UART_BB_TO_AP_RXD 697
90_EUSB_CARRIER_N 3 4 UART_AP_TO_BB_TXD 697
CARRIER_DET 5 6 SIM0_CLK_DEBUG 698
693 695 697 701 SWD_NUB_BI_BB_SWDIO 7 8 SIM0_DAT_DEBUG 698
693 695 697 701 SWD_NUB_TO_BB_SWCLK 9 10 IO_BB_FROM_SIM0_DETECT 693 697
693 695 697 716 GPIO_SEQ_PMU_TO_BBPMU_RESET_L 11 12 IO_BB_TO_SIM0_RESET 693 698
PP1V8_CARRIER 13 14 PP_VDD_SIM0 693 696 698
693 695 696 PP_VDD_MAIN_BBPMU 17 18
516S00905
R2503_C
4.99K
693 697 GPIO_NUB_TO_BB_DEBUG_EN 1 2 CARRIER_DET
1%
1/32W
TK
01005
NOSTUFF
R2500_C
10K
1%
1/32W
TK
01005-1
NOSTUFF
1 2
STUFF ONLY ON MLB_BOT ONLY CONFIGS
R2508_C
0
1 2 PP1V825_S2_BB 693 695
0%
1/32W
TK
01005
NOSTUFF
R2502_C
0
PP1V8_CARRIER 1 2 PP1V825_S4_BB 693 695 696
0%
1/32W
TK
01005
NOSTUFF
SENSE
TP2500_C A 1 SENSE_ACM_P 698
TP2501_C A TP-P55 1 SENSE_ACM_N 699
TP2502_C A TP-P55 1 SENSE_CPU_P 698
TP2503_C A TP-P55 1 SENSE_CPU_N 699
TP2504_C A TP-P55 1 SENSE_DDR_P 698
TP2505_C A TP-P55 1 SENSE_DDR_N 699
TP2506_C A TP-P55 1 SENSE_VDDQL 698
TP2507_C A TP-P55 1
TP-P55
32K MEMS CFRE EXCURSION VALIDATION
REMOVED
32K MEMS MEASUREMENT POINT
PP2585_C 1 CLK32K_BBPMU_1V8_R 695
PP2586_C 1
ALT2 REMOVED
KIS
NOSTUFF
R2504_C
0
697 90_EUSB_KIS_P 1 2 90_EUSB_BB_DBG_P 693
697 90_EUSB_KIS_N 90_EUSB_BB_DBG_N 693
0%
1/32W
TK
01005
NOSTUFF
R2506_C
0
1 2
0%
1/32W
TK
01005
R2505_C
0
1 2 90_EUSB_CARRIER_P
0%
1/32W
TK
01005
NOSTUFF
R2507_C
0
1 2 90_EUSB_CARRIER_N
0%
1/32W
TK
01005
NOSTUFF

PAGE TITLE

TEST POINTS (25)

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CONSTRAINTS

90-ohm Diff Pair Constraints

Electrical

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
E_MPHY_XCVR0	E	DIFF_PAIR_MPHY_XCVR0	DP:DP_85_MPHY*XCVR0*	?
E_PCIE_BB	E	DIFF_PAIR	DP:DP_90_PCIE*BB*	?
E_EUSB_BB	E	DIFF_PAIR	DP:DP_90_EUSB*	?

Physical

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
85_MPHY_XCVR0	P	A_85_OHM_DIFF	DP:DP_85_MPHY*XCVR0*	?
90_PCIE_BB	P	A_90_OHM_DIFF	DP:DP_90_PCIE*BB*	?
90_EUSB_BB	P	A_90_OHM_DIFF	DP:DP_90_EUSB*	?

Spacing

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
85_MPHY_XCVR0	S	A_DIELECTRIC_3X	=	?
90_PCIE_BB	S	A_DIELECTRIC_3X	=	?
90_EUSB_BB	S	A_DIELECTRIC_3X	=	?

POWER CONSTRAINTS

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
PWR_SHAPE	P	PWR_SHAPE	VDD0P97_RF_LO*	?
PWR_SHAPE	P	PWR_SHAPE	VDD0P63_XCVR0_DIG*	?
PWR_SHAPE	P	PWR_300UM	VDD1P12_VFE_LO	?
PWR_300UM	P	PWR_300UM	VDD3P15_VFE_HI	?
PWR_SHAPE	P	PWR_SHAPE	VDD0P78_FIXED	?
PWR_SHAPE	P	PWR_SHAPE	VDD1P25_RF_HI	?
PWR_300UM	P	PWR_300UM	VDD1P5_MEMS	?
PWR_150UM	P	PWR_150UM	VDD_RFFE_VIO*	?
PWR_SHAPE	P	PWR_SHAPE	VPAL*, VPAU*	?
PWR_SHAPE	P	PWR_SHAPE	VPA_ET*, VPA_2G*, VPA_AUXP*	?
PWR_300UM	P	PWR_300UM	VDD_*LNA	?
PWR_SHAPE	P	PWR_SHAPE	VDD1P0_DIG1	?
PWR_SHAPE	P	PWR_SHAPE	VDD0P78_SRAM	?
PWR_SHAPE	P	PWR_SHAPE	VDD0P86_DIG2, VDD0P84_DIG3	?
PWR_SHAPE	P	PWR_SHAPE	VDD0P78_BB_FIXED	?
PWR_500UM	P	PWR_500UM	VDD1P25_BB_RF_HI	?
PWR_300UM	P	PWR_300UM	VDD12_IO*	?
PWR_SHAPE	P	PWR_SHAPE	VDD1P1	?
PWR_150UM	P	PWR_150UM	VDD0P6_VDDQL	?
PWR_150UM	P	PWR_150UM	VDD0P72_LOW	?
PWR_150UM	P	PWR_150UM	VDD_SIM0, VDD_SIM1, VDD1P8_SIM0, VDD1P8_SIM1	?
PWR_150UM	P	PWR_150UM	VDD3P4_BOOST	?
PWR_150UM	P	PWR_150UM	PP1VX_EEPROM	?
PWR_150UM	P	PWR_150UM	VDD_RF_HI_ULPULL, VDD0P6_BBPMU_VREF	?
PWR_150UM	P	PWR_150UM	VDD_RF_HI_ULPLL, VDD_SHAPER	?
PWR_500UM	P	PWR_500UM	VDD1P2_BBPMU_INT	?
PWR_150UM	P	PWR_150UM	VDD1P5_3079_FILT	?
PWR_500UM	P	PWR_500UM	VDD1P8	?
PWR_300UM	P	PWR_300UM	VDD1P8_CLKBUFF	?
PWR_300UM	P	PWR_300UM	VDD1P25_RF_HI_*	?
PWR_300UM	P	PWR_300UM	PP1V8_CARRIER, PP1V8_CLK32K	?

SENSITIVE TRACE SHIELD

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
RF_SHIELD	S	A_DIELECTRIC_3X	SENSE*, CLK_BBPMU*	?
RFFE_SHIELD	S	A_DIELECTRIC_1.5X	DWB_*, XCVR0_RFFE*, RFFE*BB*,SHIELD_RFFE*	?
ET_DIFF	S	A_DIELECTRIC_3X	100_XCVR0_ET*	?
50_CLK_SE	S	A_DIELECTRIC_3X	50_REFLO*	?
RF_SHIELD	S	A_DIELECTRIC_3X	SNS*, FB*	?
RF_SHIELD	S	A_DIELECTRIC_3X	BB_DDR_RREF, BB_DDR_ZQ*	?
RF_SHIELD	S	A_DIELECTRIC_3X	100_PCIE*, 100_MPHY*, 90_EUSB*, 90_USB*	?
CLK_SPMI	S	A_DIELECTRIC_1.5X	SPMI*CLK*	?
GRP_SPMI_DATA	S	DEFAULT	SPMI*DAT*	?
CLK_SHIELD	S	A_DIELECTRIC_3X	=	?

PHYSICAL (PCSET)

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
DP_GENERIC	P	GENERIC_DIFF_05	DP:DP_SENSE*	?

RF CONSTRAINTS (OPTIMIZED BY LAYOUT)
TABLE CONTINUED ON FR1 UAT ANTENNAS & GPS PAGE (PAGE 24)

Grouping Constraints

Physical

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
GRP_GPIO	P	DEFAULT	GPIO*, IO_*	Y
GRP_I2C	P	DEFAULT	I2C*	Y
GRP_SPI	P	DEFAULT	SPI*MOSI*, SPI*MISO*, SPI*CS*	Y
GRP_UART	P	DEFAULT	UART*	Y
GRP_SWD	P	DEFAULT	SWD*	Y
GRP_PCIE_SIDE	P	DEFAULT	PCIE*CLKREQ*, PCIE*PERST*	Y
GRP_MISC	P	DEFAULT	RFFE*RST*, SDR*EN	Y
GRP_RFFE	P	DEFAULT	XCVR0_RFFE*	Y

Spacing

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
GRP_GPIO	S	DEFAULT	=	Y
GRP_I2C	S	DEFAULT	=	Y
GRP_I2S	S	DEFAULT	=	Y
GRP_SPI	S	DEFAULT	=	Y
GRP_UART	S	DEFAULT	=	Y
GRP_SWD	S	DEFAULT	=	Y
GRP_PCIE_SIDE	S	DEFAULT	=	Y
GRP_MISC	S	DEFAULT	=	Y

RF CONSTRAINTS

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
CLK_SHIELD	P	DEFAULT	CLK32K_*,CLK_MEMS_TO_*,CLK_BBPMU_TO_*	?
50_CLK_SE	P	A_50_THIN_SE	50_REFLO*	?
50_THIN_SE	P	A_50_THIN_SE	50_GNSS_L1*	?
50_THIN_SE	P	A_50_THIN_SE	50_HB*	?
50_THIN_SE	P	A_50_THIN_SE	50_LB_*, 50_LBDSM_RX*, 50_LBDSM_ANT*, 50_LBDSM_M	?
50_THIN_SE	P	A_50_THIN_SE	50_LCPLR*	?
50_THIN_SE	P	A_50_THIN_SE	50_LNRU*	?
50_THIN_SE	P	A_50_THIN_SE	50_LUHB_TX*, 50_LUHB_N*, 50_LUHB_ANT1*, 50_LUHB_ANT2*	?
50_THIN_SE	P	A_50_THIN_SE	50_LUHB_ANT3_M	?
50_THIN_SE	P	A_50_THIN_SE	50_LWIFI*	?
50_THIN_SE	P	A_50_THIN_SE	50_TXDSM_MIMO*, 50_TXDSM_RX*, 50_TXDSM_MHB*	?
50_THIN_SE	P	A_50_THIN_SE	50_UCPLR*	?
50_THIN_SE	P	A_50_THIN_SE	50_UNRU*	?
50_WIDE_SE	P	A_50_WIDE_SE	50_ANT4_MBHB_M	?
50_THIN_SE	P	A_50_THIN_SE	50_UMIMO*, 50_LMIMO*	?
50_THIN_SE	P	A_50_THIN_SE	50_UUHB*, 50_UHBDSM*	?
50_THIN_SE	P	A_50_THIN_SE	50_UWIFI*	?
50_WIDE_SE	P	A_50_WIDE_SE	50_ANT4_UHB	?
50_THIN_SE	P	A_50_THIN_SE	50_VCXO*	?
50_THIN_SE	P	A_50_THIN_SE	50_XCVR0_FBR*	?
50_THIN_SE	P	A_50_THIN_SE	50_XCVR0_GNSS*	?
ET_DIFF	P	A_100_OHM_DIFF	DP:DP_100_XCVR*_ET*	?
50_WIDE_SE	P	A_50_WIDE_SE	50_LBDSM_TXIN, 50_LUHB_ANT3_U, 50_TXDSM_ANT2*	?
50_WIDE_SE	P	A_50_WIDE_SE	50_ANT1*, 50_ANT3*, 50_ANT5*	?
50_WIDE_SE	P	A_50_WIDE_SE	50_ANT6*, 50_ANT7*, 50_ANT8*, 50_ANT9*	?
50_WIDE_SE	P	A_50_WIDE_SE	50_ANT2	?
50_THIN_SE	P	A_50_THIN_SE	50_TXDSM_ANT1*, 50_TXDSM_ANT3_M	?
50_CLK_THIN	P	A_50_THIN_SE	50_CLK_XCVR1	?
50_FBR_THIN	P	A_50_THIN_SE	50_*FBR*	?

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
50_LMB_HB_RX	P	A_50_THIN_SE	50_XCVR0_RX1,50_XCVR0_RX2,50_XCVR0_RX3,50_XCVR0_RX4	?
50_LMB_HB_RX	P	A_50_THIN_SE	50_XCVR0_RX5,50_XCVR0_RX6,50_XCVR0_RX7,50_XCVR0_RX8	?
50_UHB_RX	P	A_50_THIN_SE	50_XCVR0_RX9*,50_XCVR0_RX10,50_XCVR0_RX11*,50_XCVR0_RX12	?
50_UHB_RX	P	A_50_THIN_SE	50_XCVR0_RX13*,50_XCVR0_RX14,50_XCVR0_RX15*,50_XCVR0_RX16	?
50_UHB_RX	P	A_50_THIN_SE	50_XCVR0_RX17,50_XCVR0_RX18	?
50_LMB_HB_RX	P	A_50_THIN_SE	50_XCVR0_RX21,50_XCVR0_RX22,50_XCVR0_RX23,50_XCVR0_RX24	?
50_LMB_HB_RX	P	A_50_THIN_SE	50_XCVR0_RX25,50_XCVR0_RX26,50_XCVR0_RX27,50_XCVR0_RX28	?
50_LMB_HB_RX	P	A_50_THIN_SE	50_XCVR0_RX29,50_XCVR0_RX30	?
50_2G_LB_SPAD_TX	P	A_50_THIN_SE	50_XCVR0_TX1_LB,50_XCVR0_TX2_LB,50_XCVR0_TX0_2G	?
50_HB_SPAD_TX	P	A_50_THIN_SE	50_XCVR0_TX1_MBHB1,50_XCVR0_TX2_MBHB	?
50_HB_SPAD_TX	P	A_50_THIN_SE	50_XCVR0_TX1_LMB*,50_XCVR0_TX2_LMB*	?
50_UHB_SPAD_LAT_TX	P	A_50_THIN_SE	50_XCVR0_TX1_UHB1,50_XCVR0_TX2_UHB,50_XCVR0_TX2_CB1	?
50_TXDSM_TX	P	A_50_THIN_SE	50_XCVR0_TX1_MBHB2,50_XCVR0_TX3_HB	?
50_UHB_SPAD_UAT_TX	P	A_50_THIN_SE	50_XCVR0_TX1_UHB2,50_XCVR0_TX3_UHB,50_XCVR0_TX3_CB1	?

SPACING (SCSET)

CLASS DEFINITIONS			COMMA SEPARATED WITH WILDCARD SUPPORT: NET NAMES EX: DDR*	CLEAR OVERRIDE
CLASS NAME	DOMAIN E,P,S	CONSTRAINT SET	DP NAMES EX: DP:DP_AA*,DP_BB* (LINE STARTS WITH FLAG DP:)	Y/N
DP_GENERIC	S	A_DIELECTRIC_3X	=	?
RF_SHIELD	S	A_DIELECTRIC_3X	=	?
50_WIDE_SE	S	A_DIELECTRIC_2X_50_WIDE_SE	=	?
50_THIN_SE	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
ET_DIFF	S	A_DIELECTRIC_3X	=	?
50_LMB_HB_RX	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_UHB_RX	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_2G_LB_SPAD_TX	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_HB_SPAD_TX	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_UHB_SPAD_LAT_TX	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_TXDSM_TX	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_UHB_SPAD_UAT_TX	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_CLK_THIN	S	A_DIELECTRIC_3X	=	?
50_FBR_THIN	S	A_DIELECTRIC_2X_50_THIN_SE	=	?
50_MMW_BG1_SE	S	NA_DIELECTRIC_2X_50_MMW_BG1_SE	=	?
50_MMW_BG2_SE	S	NA_DIELECTRIC_2X_50_MMW_BG2_SE	=	?
50_MMW_IF	S	NA_DIELECTRIC_2X_50_MMW_IF_SE	=	?
50_MMW_BG1_MB_SE	S	NA_DIELECTRIC_2X_50_MMW_BG1_SE	=	?

SPACING MATRIX

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
ET_DIFF	GND	DEFAULT
RF_SHIELD	GND	DEFAULT
RFFE_SHIELD	GND	DEFAULT
DP_GENERIC	GND	DEFAULT
50_WIDE_SE	50_WIDE_SE	A_DIELECTRIC_3.2XV_50_WIDE_SE
50_WIDE_SE	50_THIN_SE	A_DIELECTRIC_4XD_50_WIDE_SE
50_WIDE_SE	50_LMB_HB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_WIDE_SE	50_UHB_RX	A_DIELECTRIC_4XD_50_WIDE_SE
50_WIDE_SE	50_2G_LB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_WIDE_SE	50_HB_SPAD_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_WIDE_SE	50_UHB_SPAD_LAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_WIDE_SE	50_TXDSM_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_WIDE_SE	50_UHB_SPAD_UAT_TX	A_DIELECTRIC_4XD_50_WIDE_SE
50_THIN_SE	50_THIN_SE	A_DIELECTRIC_4XD_50_THIN_SE
50_THIN_SE	50_LMB_HB_RX	A_DIELECTRIC_4XD_50_THIN_SE
50_THIN_SE	50_UHB_RX	A_DIELECTRIC_4XD_50_THIN_SE
50_THIN_SE	50_2G_LB_SPAD_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_THIN_SE	50_HB_SPAD_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_THIN_SE	50_UHB_SPAD_LAT_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_THIN_SE	50_TXDSM_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_THIN_SE	50_UHB_SPAD_UAT_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_LMB_HB_RX	50_UHB_RX	A_DIELECTRIC_2x
50_LMB_HB_RX	50_2G_LB_SPAD_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_LMB_HB_RX	50_HB_SPAD_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_LMB_HB_RX	50_UHB_SPAD_LAT_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_LMB_HB_RX	50_TXDSM_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_LMB_HB_RX	50_UHB_SPAD_UAT_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_UHB_RX	50_2G_LB_SPAD_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_UHB_RX	50_HB_SPAD_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_UHB_RX	50_UHB_SPAD_LAT_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_UHB_RX	50_TXDSM_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_UHB_RX	50_UHB_SPAD_UAT_TX	A_DIELECTRIC_4XD_50_THIN_SE
50_LMB_HB_RX	50_LMB_HB_RX	A_DIELECTRIC_2X
50_UHB_RX	50_UHB_RX	A_DIELECTRIC_2X
50_2G_LB_SPAD_TX	50_2G_LB_SPAD_TX	A_DIELECTRIC_2X
50_HB_SPAD_TX	50_HB_SPAD_TX	A_DIELECTRIC_2X
50_UHB_SPAD_LAT_TX	50_UHB_SPAD_LAT_TX	A_DIELECTRIC_2X
50_TXDSM_TX	50_TXDSM_TX	A_DIELECTRIC_2X
50_UHB_SPAD_UAT_TX	50_UHB_SPAD_UAT_TX	A_DIELECTRIC_2X
50_CLK_THIN	50_CLK_THIN	A_DIELECTRIC_3X_50_CLK_THIN_SE
50_FBR_THIN	50_FBR_THIN	A_DIELECTRIC_4XV_50_THIN_SE

POWER LX - CLASS-CLASS SPACING

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
PWR_SHAPE_LX	CLK	A_DIELECTRIC_3X
PWR_SHAPE_LX	CLK_SPI	A_DIELECTRIC_3X
PWR_SHAPE_LX	PWR_SHAPE_LX	DEFAULT
PWR_SHAPE_LX	GND	DEFAULT
PWR_SHAPE_LX	RF_SHIELD	A_DIELECTRIC_3X
PWR_SHAPE_LX	RFFE_SHIELD	A_DIELECTRIC_3X
PWR_SHAPE_LX	ET_DIFF	A_DIELECTRIC_3X
PWR_SHAPE_LX	50_CLK_SE	A_DIELECTRIC_3X
PWR_SHAPE_LX	CLK_SPMI	A_DIELECTRIC_3X
PWR_SHAPE_LX	GRP_SPMI_DATA	A_DIELECTRIC_3X

Class-Class Spacing

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
90_PCIE_BB	GND	A_DIELECTRIC_3X
90_EUSB_BB	GND	A_DIELECTRIC_2X
85_MPHY_XCVR0	GND	DEFAULT

CLASS TO CLASS SPACING		
CLASS NAME	CLASS NAME	CONSTRAINT SET
50_WIDE_SE	GND	A_DIELECTRIC_1.6X_50_WIDE_SE
50_THIN_SE	GND	A_DIELECTRIC_2X_50_THIN_SE
50_LMB_HB_RX	GND	A_DIELECTRIC_2X_50_THIN_SE
50_UHB_RX	GND	A_DIELECTRIC_2X_50_THIN_SE
50_2G_LB_SPAD_TX	GND	A_DIELECTRIC_2X_50_THIN_SE
50_HB_SPAD_TX	GND	A_DIELECTRIC_2X_50_THIN_SE
50_TXDSM_TX	GND	A_DIELECTRIC_2X_50_THIN_SE
50_UHB_SPAD_UAT_TX	GND	A_DIELECTRIC_2X_50_THIN_SE
50_CLK_SE	GND	DEFAULT
RF_SHIELD	RF_SHIELD	A_DIELECTRIC_3X
CLK_SPMI	GRP_SPMI_DATA	A_DIELECTRIC_1.5X
CLK_SHIELD	GND	DEFAULT

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